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To Whom It May Concern:

The American Wild Horse Campaign ("AWHC"), the Animal Welfare Institute ("AWI"), and the Cloud Foundation ("TCF") (collectively "the Groups") submit these comments on the Bureau of Land Management's ("BLM") *Spay Feasibility and On-Range Outcomes Environmental Assessment*, DOI-BLM-ORWA-B050-2019-0013-EA ("the EA"). In this EA, BLM proposes yet again to undertake experiments on an inhumane and highly controversial form of spaying mares called ovariectomy via colpotomy, which the agency has twice before proposed and withdrawn in the face of public outcry, calls for close scrutiny of the agency's treatment of wild horses, and ultimately litigation, including two lawsuits from the Groups. These comments alert BLM that it has not provided for sufficient public observation of its treatment of wild horses in the proposed experiments, that the agency's refusal to consider the social acceptability of its experiments is arbitrary and capricious, and that in light of the controversial and precedent-setting nature of these experiments, BLM must prepare an Environmental Impact Statement ("EIS") rather than an EA. Additionally, these comments request that BLM allow the Groups to meaningfully observe the agency's experiments, as described in detail below.

The American Wild Horse Campaign ("AWHC") is a national, nonprofit organization dedicated to preserving the American wild horse in viable free–roaming herds for generations to come, as part of our national heritage. Our grassroots efforts are supported by a coalition of over 60 historic preservation, conservation, horse advocacy and animal welfare organizations.

The Animal Welfare Institute ("AWI") is a national, nonprofit charitable organization founded in 1951, dedicated to alleviating the suffering inflicted on animals by humans. AWI engages policymakers, scientists, industry professionals, non-governmental organizations, farmers, veterinarians, teachers, and the public in its broad animal protection mission. AWI works to minimize the impacts of all human actions that are detrimental to wildlife including by mitigating the use of inhumane methods to manage free-roaming wild horses and burros.

The Cloud Foundation ("TCF") is a Colorado 501(c)3 nonprofit corporation, that grew out of Executive Director Ginger Kathrens' knowledge and fear for wild horses in the West. TCF works to educate the public about the natural free-roaming behavior and social structure of wild horses

and the threats to wild horse and burro society, to encourage the public to speak out for their protection on their home ranges, and to support only humane management measures. Ms. Kathrens serves as the Humane Advisor on BLM's National Wild Horse and Burro Advisory Board.

I. INTRODUCTION

This EA marks the third time that BLM has proposed to experiment on ovariectomy via colpotomy—and the third time that the agency has proposed to curtail the public's ability to fully witness and understand what this procedure will entail for the wild horses subjected to it. The Groups previously submitted extensive comments and evidence during the previous administrative processes, and the Groups now incorporate those materials by reference. (Attachment 1).

In 2015, BLM proposed to study ovariectomy via colpotomy as well as two other forms of sterilizing wild mares that would likely be more humane. (Attachment 2). At that time, BLM stated that the experiments aimed to address "[t]he ultimate question in the reasonably foreseeable future of wild horse population management"—namely, "which [sterilization] methods are safe, effective, and socially acceptable[.]" *See* Attachment 2, at 53. At that time, AWHC, TCF, and Ms. Ginger Kathrens, TCF's executive director and the Humane Advocate on BLM's Wild Horse Advisory Board, requested that BLM drop the proposed experiment on ovariectomy via colpotomy, or at a minimum allow for observation and recording of the experiments. (Attachment 3). After BLM rejected a request for live observation, ostensibly based on safety concerns, (Attachment 3), AWHC, TCF, and Ms. Kathrens explained that direct observation and recording would further the BLM's goal of assessing the "social acceptability" of experimental procedures and proposed the use of small, unobtrusive cameras that would in no way impair BLM's ability to execute the experiments. (Attachment 3). BLM again rejected that request. (Attachment 3). Consequently, AWHC, TCF, and Ms. Kathrens filed suit challenging BLM's restrictions on public observation and sought a preliminary injunction to protect their rights under the First Amendment to the Constitution. (Attachment 4). Rather than responding to that lawsuit or allowing for any public observation, BLM simply abandoned the proposed experiments.

In 2018, BLM again proposed to undertake experiments with ovariectomy via colpotomy. This iteration of the proposed experiments dropped any effort to study more humane forms of mare sterilization, and inexplicably abandoned any effort to assess whether BLM's treatment of wild horses could be considered "socially acceptable." (See Attachment 2). Although this iteration of the proposed experiment provided for some limited public observation, stringent limits on observation and recording made that level of observation ineffective. (See Attachment 1). Accordingly, the Groups again requested that BLM allow for meaningful observation and recording of the agency's treatment of the wild mares, which BLM refused. (See Attachment 2). Consequently, the Groups filed suit to protect their constitutional rights and sought a preliminary injunction to prevent the experiments from going forward before the Groups' claims could be adjudicated. (Attachment 5). The District of Oregon granted the Groups' requested preliminary injunction at a hearing on November 2, 2018. (Attachment 6). The BLM then withdrew the proposed experiment. (Attachment 7).

With this EA, BLM is now proposing to move ahead with experiments with ovariectomy via colpotomy and expressly refusing to consider whether this procedure is socially acceptable. Moreover, BLM has not offered any greater level of public observation than it did in 2018, despite the fact that the Groups previously challenged this level of public observation as insufficient under the First Amendment and successfully obtained a preliminary injunction on that basis. Accordingly, because BLM is again proposing experiments that are based on an inadequate NEPA analysis, that disregard clearly critical aspects of the decision before the agency, and that wrongfully obstruct meaningful public observation of the agency's treatment of statutorily protected wild horses, the Groups hereby advise BLM that undertaking the experiments as proposed would be unlawful in several important respects. If the agency intends to proceed with these experiments, it must at a minimum:

- Prepare an Environmental Impact Statement;
- Implement scientifically based observation of the welfare of sterilized mares; and
- Provide for meaningful public observation, including allowing for observation by an independent, licensed veterinarian and for complete and accurate recording of the surgical procedures and of mares in recovery.

II. BACKGROUND

A. The First Amendment

"[T]he Supreme Court has long recognized a qualified right of access for the press and public to observe government activities" protected by the First Amendment. *Leigh v. Salazar*, 677 F.3d 892, 898 (9th Cir. 2012). This right is rooted in the fact that "[o]pen government has been a hallmark of our democracy since our nation's founding" and that constitutionally protected "transparency has made possible the vital work of . . . countless [] investigative journalists who have strengthened our government by exposing its flaws." *Id.* at 897.

Because "[t]he free press is the guardian of the public interest, and the independent judiciary is the guardian of the free press[,] . . . courts have a duty to conduct a thorough and searching review of any attempt to restrict public access." *Id.* at 900. The judiciary's scrutiny is especially important because "[w]hen wrongdoing is underway, officials have great incentive to blindfold the watchful eyes of the Fourth Estate." *Id.* Accordingly, "a court cannot rubberstamp an access restriction simply because the government says it is necessary." *Id.*

B. NEPA

Congress enacted NEPA more than four decades ago "[t]o declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment . . . ." 42 U.S.C. § 4321. In light of this mandate, the Supreme Court has found that NEPA is "intended to reduce or eliminate environmental damage and to promote 'the understanding of the ecological systems

and natural resources important to' the United States." *Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 756 (2004) (quoting 42 U.S.C. § 4321). NEPA is intended to "ensure that [federal agencies] . . . will have detailed information concerning significant environmental impacts" and "guarantee[] that the relevant information will be made available to the larger [public] audience." *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1212 (9th Cir. 1998).

In NEPA's implementing regulations, there are two specific mechanisms whereby federal agencies must evaluate the environmental and related impacts of a particular federal action—an EA and an EIS. *See* 42 U.S.C. § 4332(c). These procedural mechanisms are designed to inject environmental considerations "in the agency decision making process itself," and to "'help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.'" *Pub. Citizen*, 541 U.S. at 768-69 (quoting 40 C.F.R. § 1500.1(c)). Therefore, "NEPA's core focus [is] on improving agency decision making," *id*. at 769 n.2, and specifically on ensuring that agencies take a "hard look" at potential environmental impacts and environmentally enhancing alternatives "as part of the agency's process of deciding whether to pursue a particular federal action." *Baltimore Gas and Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 100 (1983). The alternatives analysis "is the heart" of the NEPA process. 40 C.F.R. § 1502.14. NEPA's implementing regulations require that the decision-making agency "present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public." *Id.* Importantly, the NEPA process "shall serve as the means of assessing the environmental impact of proposed agency actions, *rather than justifying decisions already made*." 40 C.F.R. § 1502.2(g) (emphasis added); *see also Id.* § 1502.5 (requiring that NEPA review "shall be prepared early enough *so that it can serve practically as an important contribution to the decision making process* and *will not be used to rationalize or justify decisions already made*") (emphasis added), *Metcalf v. Daley*, 214 F.3d 1135, 1141-42 (9th Cir.
2000) ("the comprehensive 'hard look' mandated by Congress and required by the statute must be timely, and it must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made.").

An EIS must be prepared by an agency for every "major Federal action significantly affecting the quality of the human environment." 42 U.S.C. § 4332(c). Under NEPA's implementing regulations, "significance" requires consideration of both context and intensity. 40 C.F.R. 1508.27 (2018). "Context" refers to the scope of the activity, including the affected region, interests, and locality, varying with the setting of the action, and include both short and long-term effects. 40 C.F.R. 1508.27(a). "Intensity" refers to the severity of impact, including impacts that may be both beneficial and adverse; unique characteristics of the geographic area, such as proximity to wetlands, wild and scenic rivers, or ecologically critical areas; the degree to which the effects on the quality of the human environment are likely to be highly controversial; the degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration; whether the action is related to other actions with individually insignificant but cumulatively significant impacts; the degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act;

and whether the action threatens a violation of federal law imposed for the protection of the environment. *See* 40 C.F.R. § 1508.27. Where an action is not expected to result in a significant environmental impact, the agency must still prepare an EA and a FONSI. *Id.* §§ 1508.9, 1501.3.

C. The Wild Horse Act

In response to overwhelming public outcry over the inhumane treatment and slaughter of wild horses on the public range, Congress passed the Wild Free-Roaming Horses and Burros Act ("WHA") in 1971 to ensure that "wild free-roaming horses and burros shall be protected from capture, branding, harassment, [and] death." 16 U.S.C. § 1331. Congress found that wild horses and burros "are living symbols of the historic and pioneer spirit of the West," and "contribute to the diversity of life forms within the Nation and enrich the lives of the American people." *Id.*

The WHA embodies a congressional intent to require BLM to manage wild horse populations humanely. Congress repeatedly stressed its intent to require humane management. *See id.* § 1333(b)(2)(iv)(B) (requiring that BLM ensure that wild horses removed from the range are "humanely captured" and that BLM "assure [the] humane treatment and care" of wild horses made available for adoption").[1] To ensure that BLM honors the WHA's commitment to humane wild horse management, Congress instructed BLM to regularly consult with experts in wild horse protection. To that end, Congress required BLM to create the National Wild Horse and Burro Advisory Board to include individuals with "special knowledge about protection of horses and burros" who can "advise [the agency] on any matter relating to wild free-roaming horses and burros and their management and protection." 16 U.S.C. § 1337. Thus, Congress specifically stated that BLM "shall consult with . . . individuals . . . as have been recommended by the National Academy of Sciences, . . . and such other individuals whom [it] determines have . . . special knowledge of wild horse and burro protection" when determining whether to manage wild horse populations "by the removal or destruction of excess animals, or other options (such as sterilization, or natural controls on population levels)." *Id.* § 1333(b)(1). Thus, Congress clearly intended BLM to consider the informed input of experts in "wild horse and burro protection" when considering the possibility of sterilizing wild horses.

D. The Administrative Procedure Act

Under the APA, a court "shall" "set aside agency action, findings, and conclusions found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law," or when they are adopted "without observance of procedure required by law." 5 U.S.C. § 706(2)(A), (D). Agency action is arbitrary and capricious if the agency "relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency," or if the agency's decision "is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Motor Vehicle Mfr. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). The Court must ensure that the agency reviewed the relevant data and

[1] *See also In Def. of Animals v. U.S. Dept. of Interior*, 751 F.3d 1054, 1060 n.6 (9th Cir. 2014) (noting that although the WHA initially contemplated the "destruction" of wild horses, Congress has never authorized the use of funds for wild horse slaughter).

articulated a satisfactory explanation establishing a "rational connection between the facts found and the choice made." *State Farm*, 463 U.S. at 43. Although an agency may deviate from its prior practice, it "is obligated to supply a reasoned analysis for the change." *Id.* at 41-43.

E. The Animal Welfare Act

In promulgating the Animal Welfare Act ("AWA") in 1966, Congress found that the Act was essential to "insure that animals intended for use in research facilities . . . are provided humane care and treatment. . . ." 7 U.S.C. § 2131(1). To achieve this overriding purpose, the AWA and its associated regulations (at 9 C.F.R. § 1 *et seq*.) provide minimal standards for the care, handling, transportation, and use of animals for research and exhibition.

For animals used in research, the legal requirements extend beyond ensuring the humane care of the animals, also requiring the establishment of Institutional Animal Care and Use Committees ("IACUC"). IACUCs are provided broad authority to review an institution's program for the humane care and use of animals, to inspect the institution's animal facilities, and to review experimental protocols to ensure that they satisfy criteria intended to avoid the use of animals in unnecessarily duplicative experiments, minimize any discomfort, distress, or pain caused to animals used in experiments, and provide other oversight to ensure the humane treatment of said animals. *See generally* 9 C.F.R. § 2.31.

III. DISCUSSION

A. BLM Must Allow Meaningful Public Observation of the Proposed Experiments.

As the Groups have repeatedly advised BLM, the First Amendment to the U.S. Constitution establishes the public's right to observe government activities, and the Ninth Circuit has held that this right extends to the BLM's management of wild horses. *See Leigh*, 677 F.3d at 898. Where the public has a right to observe government activities, any restrictions on public observation must be narrowly tailored to serve an overriding government interest. *Id.* In other words, the limits on observation must be the least restrictive limitations that will achieve the government's overriding interest.

In 2018, BLM proposed a substantially similar experiment with essentially the same limitations on public observation that the agency now proposes. Then and now, the agency would limit public observation of the experiments to five observers at a time who may observe and record the experiments only from a room adjacent to the working chute in which BLM will actually perform its surgical experiments. Observation of the experiments themselves from this location would be extremely limited. Additionally, the public would be allowed to observe animals recovering in pens outside the Hines Corral during the Corral's normal working hours, from a "self-guided auto tour" that has an extremely limited vantage point of the mares in recovery.

As the Groups have repeatedly explained, the BLM's proposed limitations on public observation are not narrowly tailored and do not comport with the First Amendment. As Ms. Kathrens, an Emmy-award winning documentarian, previously stated, the BLM's limitations on observation mean that the public will only be able to observe from a vantage point that "offers an impossible

angle of sight and filming of the procedures" in which "the observers will only be able to see the equipment, but not the horse." (*See* Attachment 8, Kathrens Decl., ¶ 19). Ms. Kathrens further noted that "[t]he goal of observing is to actually be able to view the procedure, as well as the reactions and treatment of the horses," but "[t]his will simply not be possible under the BLM's planned observation restrictions." *Id.* Ms. Kathrens also offered further descriptions of the inadequacy of this observation opportunity, which are incorporated here by reference. *See generally id.* Ms. Kathrens further explained that BLM's restrictions on observation are unreasonable in light of her previous experiences observing a veterinary procedure at the Hines Corral, including an experience in which at least 15 people were able to stand near the working chute, and in light of the history of observation of ovariectomy via colpotomy.

Consequently, in 2018, the Groups again requested—as they did in 2016—that BLM allow for observation of the experiments themselves by one independent, licensed equine veterinarian and through small, unobtrusive cameras. The Groups explained that the independent, licensed veterinary observer would require a clear vantage point for observation and would remain quiet and non-disruptive. The Groups further explained that small, unobtrusive cameras would help the public understand these experiments, evaluate whether ovariectomy via colpotomy is appropriate for use on wild horses, and would provide for 24-hour observation of horses in recovery, improving the odds of a humane outcome. (See Attachment 1, The Groups' 2018 Comments).

After BLM rejected the Groups' requested observation, the Groups obtained a preliminary injunction to preserve their rights under the First Amendment. The Court found that the Groups had established a likelihood of prevailing on the merits of their claim that BLM's restrictions on observation violate the First Amendment, and that the Groups would likely be irreparably harmed by the inability to meaningfully observe these experiments. The Groups are attaching and incorporate by reference the materials filed in support of their preliminary injunction motion as well as the transcript of the preliminary injunction hearing. (Attachment 9).

Marc Bekoff, professor emeritus of Ecology and Evolutionary Biology at the University of Colorado, Boulder and a Fellow of the Animal Behavior Society also provided comment in recent correspondence with the Groups on the EA's failure to consider social acceptability of the procedure and lack of public transparency. Dr. Bekoff's main areas of research include animal behavior, cognitive ethology (the study of animal minds), behavioral ecology, and compassionate conservation, and he has also published extensively on human-animal interactions and animal protection. He stated:

> The BLM's proposed experiment to study the risks associated with employing the "ovariectomy via colpotomy" surgical procedure on wild horses raises a number of ethical concerns. *Perhaps most troubling in terms of the validity of this research proposal is the lack of independent veterinary oversight to document the welfare of the horses and the outcomes of the surgeries.* The BLM in essence wants people to take the agency's word for it – i.e., that the experiment is humane and that the surgical procedure poses few, if any, problems. These are federally protected wild horses of course, so the public has a right to observe how the government seeks to "manage" these animals. Not surprisingly, the BLM seems apprehensive about

> providing full transparency in this case, but that reluctance only underscores the troubling nature of what the agency is proposing to do.

Now, BLM has proposed a level of observation identical to what the District of Oregon already found is a likely constitutional violation. In order to correct this constitutional violation, the Groups again request that BLM allow for meaningful public observation and recording, as described in detail below.

1. Allow Observation of the Experiments by an Independent, Licensed Equine Veterinarian.

Because BLM's experiment on ovariectomy via colpotomy is currently planned without any effort to provide for independent, qualified observation of the welfare, pain, or suffering of mares subjected to this experiment, the need for independent, qualified observation of the entirety of this experiment is clear. Indeed, BLM previously recognized the importance of independent observation of the degree to which mares will be subject to pain and suffering by contracting with CSU to provide this type of observation. Although the Groups do not intend in any way to be partners with the BLM on an experiment they oppose as unnecessary and inhumane, the Groups believe that independent, qualified observation of the welfare of the wild mares remains essential, especially in light of BLM's abandonment of scientifically based observations of mares' welfare.

Accordingly, we request that BLM permit the presence of one licensed equine veterinarian, designated by the Groups, in the working room to observe and record the agency's surgical experiments on ovariectomy via colpotomy at any given time. If BLM agrees to this request, we will agree to notify the agency of the licensed equine veterinarian that will observe the surgeries each day. Although the Groups may identify more than one veterinarian in the event that one individual is not available at all times, we request that BLM provide room for one veterinarian to observe and record in the working room at any given time. The Groups further agree that while the veterinarian observer must be provided with a clear vantage point for observation, the observer will remain quiet and non-disruptive.

Ms. Ginger Kathrens, founder and Executive Director of the Cloud Foundation, noted that "at least 15 people were able to stand near the chute" during her BLM-led tour of the Hines Corral. (See Attachment 1, p. 14 AWHC and AWI Comments July 30, 2018). Ms. Kathrens further explains the following inadequacies of the opportunities for observation that are currently allowed under the 2019 EA.

> Although the BLM is allowing limited public observation and recording, the designated observation points as shown in Appendix E of the EA do not give observers a chance to make meaningful observations. The observation point within the working area allows observers to only view the side of the chute, which is completely closed and seals the mare from the outside. The veterinarian would further block observers' view of the mare during the surgery, leaving virtually no ability to view the mare or the procedure.

> The recovering pens designated for the post-op mares are not visible from the observation point. Not only do the fences and chute block views of the pens, the observation point and the pens are also a long distance apart from one another. As seen in appendix E of the EA, picture C, the observation point does not allow visitors to look at either the center, the far left or the far right of the pens and does not provide meaningful observations. Given the wild nature of the mares, it is likely that they will want to recover in the calmest place: far back, away from human activity, or all the way in the front, close to the outside. It is unacceptable that the observation point for observing the recovery pens inside the working barn are not suitable for providing meaningful observations.
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> Lastly, the recovery pens outside the barn are too far removed from the "Auto Tour" road. Wild horses will likely not recover near the fences on the roadside but will instead choose to stay as far from human noise and interference as possible. Visibility from the "Auto Tour" road is limited, and it is unacceptable that the BLM has not provided for truly meaningful observation of these mares post-surgery.

BLM has attempted to defend its restrictions on observation by invoking ostensible "overriding interests" in safety as well as in "effectively and efficiently performing ovariectomy via colpotomy procedures on the horses." EA at 34. Although the Groups agree that the government has an interest in the safety of horses and humans involved in the experiments, the Groups do not agree that this interest justifies the restrictions that BLM has imposed.[2]

The presence of a single, licensed equine veterinarian observer does not present a safety hazard that could justify the exclusion of that observer. Indeed, in a previous iteration of this proposed experiment, three specialists from Colorado State University ("CSU") would have overseen "all aspects" of the experiments, including surgery; because BLM previously planned to allow oversight by three CSU specialists, it cannot credibly claim now that a single observer would thwart its interests.

Dr. Bernie Rollin, Professor of philosophy, animal sciences, and biomedical sciences at Colorado State University reviewed the EA and stated in recent correspondence with the Groups the following on the ethical concerns of the proposed study, especially after CSU's departure.

> As a bioethicist with over fifty years of experience and as a University Distinguished Professor at Colorado State University, I was gratified when my

[2] The Groups do not agree that BLM has an overriding interest in performing ovariectomy via colpotomy procedures. An "overriding interest" must be "based on findings that closure is essential to preserve higher values." *United States v. Yazzie*, 743 F.3d 1278, 1286 (9th Cir. 2014). Because ovariectomy via colpotomy is an inhumane procedure that has been widely displaced in the veterinary community by more modern and more humane practices, the Groups do not believe it is even a legitimate way to implement a statute that is focused on the protection of wild horses, and is certainly not a "higher value" than meaningful public observation of the government's conduct. In any event, even if BLM does have an interest in the "effective and efficient" performance of this procedure, the presence of a single, independent licensed veterinarian near the working chute, or of cameras, are in no way an impediment to that interest.

> home institution opted to terminate its partnership with the BLM last summer in helping to carry out and oversee the controversial and invasive "ovariectomy via colpotomy" experiments on wild horses. In my view, the research proposal was – and continues to be – fraught with serious ethical problems. It's telling that even after CSU ended its involvement with the project, the BLM clung to the university's IACUC approval as a means to provide some semblance of credibility (when of course, once CSU had left, the proposal changed substantially insofar as independent welfare observations would no longer form a component of the research).

Moreover, there is ample evidence that observation of veterinary procedures in no way impairs safety or efficacy. For example, Dr. Robin Kelly, who has 36 years of veterinary experience and has actually performed reproductive surgery on wild horses in the presence of observers, explains that she "do[es] not believe that observers would in any way affect the ability of a qualified veterinarian to safely and effectively perform a procedure on a wild horse, as long as the horse is properly sedated and pain is effectively controlled." (Attachment 10 at 57 Kelly Decl. ¶ 8). Dr. Kelly also notes that allowing observers who are not affiliated with the BLM or the research staff would "provide for recordings and/or unbiased, first-hand reports that would be useful to the public in determining whether these procedures are an appropriate way to care for wild horses." *Id.*

Additionally, Dr. Pamela Corey, who also has decades of related experience, notes that in her practice, which regularly involves surgery on horses in the presence of observers, "bystanders do not in any way affect my ability to safely and effectively perform surgery on a properly sedated horse." (Attachment 10 at 62 Corey Decl. ¶ 3). Dr. Corey also notes, "observers or recording devices would not increase the risk of errors during surgery, nor increase the risk of injury to horses or veterinarians." *Id*. The only time Dr. Corey has requested that observers alter their behavior is when she has "had to ask small children to take a step back while observing, as not to injure themselves…"

Similarly, Dr. Allen Rutberg, a researcher with over 20 years of experience studying wildlife contraception and wild horse management, attests to the fact that during his "extensive field research on free-roaming deer and wild horses," observation, still photography, and videotaping by journalists and the public has been "commonplace" and that he has "never had an incident where an observer disrupted the research protocol or posed a threat to animal or researcher safety." (Attachment 10 at 91-92 Rutberg Decl. ¶ 4-5).

Nor does observation of ovariectomy via colpotomy increase the risks of that procedure. For example, Dr. Leon Pielstick, "a veterinarian who has worked with BLM since 1975," (Attachment 11) previously invited nine observers to observe and record him sterilizing a horse and four wild burros using this technique. (Attachment 10 at 96-98 Netherlands Decl., ¶¶ 3–8). Despite the fact that "[t]he observers were not quiet" and that "chatter among the observers, and even laughter, is regularly audible" in the recording, Dr. Pielstick never indicated that the observers' behavior posed any distraction to him or any risk to the animals. *Id*. ¶ 8. Thus, even the behavior of a veterinarian that BLM itself relies on, confirms that BLM's protestations about observation creating distractions and risks are groundless. Moreover, BLM itself confirms that

recording should not disrupt surgical procedures because the agency itself has published several narrated videos of the procedure being performed in other locations; such as the video that was published on the ePlanning page with the 2018 EA.

Accordingly, BLM's stated "overriding interests" do not justify the exclusion of a single, licensed equine veterinarian from observation of the proposed experiments from within the room containing the working chute. To meaningfully observe the welfare of the mares during the surgery, the independent observer should be allowed to move from behind the veterinarian (up to the chute to see around his back) and around to the front of the mare (to observe her head level, record any vocalizations, and document other reactions related to the procedure). Even if the front doors are kept closed in an effort to keep the mare as calm as possible, the independent observer should be allowed freedom of movement in the surgical space so as to best observe the mares' interactions with BLM staff and reactions to the procedure. Since this independent observer will be a trained professional, the individual will know how to stay out of the way of the staff as they transport horses and conduct the procedure and will know to remain quiet and respectful throughout the experiment.[3]

2. Allow Small, Unobtrusive Cameras to Record the Experiments and the Mares in Recovery.

The Groups also request that BLM allow them to install (at the Groups' expense) several small, unobtrusive cameras in order to provide a clear and comprehensive recording of the experiments and of the mares in recovery. These cameras would be removed from BLM property after the experiments and recovery are complete. A continuous record of the experiments would help the public evaluate whether this experimental procedure is an appropriate way to manage wild horse populations, and cameras could also provide for 24-hour observation of horses in recovery, improving the odds of a humane outcome for any horses that suffer from post-surgical complications by making it possible to catch such complications at an early stage.

Ms. Kathrens also expressed the following suggestions, for inclusion with these comments, on camera use to aid observation for the proposed experiments:

> The best spots to place the cameras to record the surgery would be at the front and back of the chute, looking down into the chute from a higher angle. To provide meaningful observation, a camera should be installed from higher points looking into the front and back of the chute which records all surgeries, as well as the horses' reactions, and provides clear audio and video of the live procedure.
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> As previously explained, given the wild nature of the mares it is likely that they will want to recover in the calmest place: far back, away from human activity, or all the way in the front, close to the outside. The observation point for observing the recovery pens inside the working barn are not suitable for providing meaningful observations. The public must be allowed to fully observe the recovery of these mares, and we insist cameras are installed in both the front and back of the recovery

[3] The observer would be willing to step out of the way, for example into the currently designated observation room, while BLM is moving wild horses in or out of the working chute.

pens recording the recovery of all the mares 24 hours a day, for the full recovery time.

Lastly, as previously explained, the recovery pens outside the barn are too far removed from the "Auto Tour" road. Wild horses will likely not recover near the fences on the roadside but will instead choose to stay as far from human noise and interference as possible. Visibility from the "Auto Tour" road is limited, and it is unacceptable that the BLM has not provided for truly meaningful observation of these mares post-surgery. Cameras must be installed in all outside pens providing complete vision on the recovering mares, recording for 24 hours a day, during the full recovery time.

The cameras that the AWHC suggests are small, unobtrusive and can easily be installed on the fence panel adjacent to the chute, the initial recovery corral and the outdoor, and temporary holding pen. The cameras we would likely use are the trail cameras pictured below. These cameras record in HD (so horse markings will be seen), are motion activated, waterproof, wide angle, have night vision, are durable, and take AA batteries. Camera A weighs about one pound and measures 3.8"x5.5"x2.6". Camera B weighs roughly 3.5 pounds and measures 12.1"x10.3"x5". AWHC would also provide the mount, batteries, and SD cards.

Camera A:

Camera B:

The Groups are attaching to these comments pictures (Attachment 12) explaining exactly where these cameras would be installed in accordance with the following description: one Camera B on a panel behind and immediately adjacent to the chute, mounted on the right side (opposite side of the vet), with a clear view of the surgical area (roughly at least three feet away from the vet); one Camera A at the front of the chute, mounted on a panel (even if the doors to the chute are closed during the procedure, the camera will still record audio which will be valuable in analyzing any vocalizations that the mare makes in response to the procedure); one Camera A in the initial holding pen within the indoor part of the facility, mounted on a panel facing into the pen so as to monitor the mares as they initially recover from the procedure; and two Camera A's in the outdoor holding pen where the mares will be kept and observed for one week.

AWHC would like to work with the BLM to ensure safe installation and operation of the devices. In order to do so, AWHC would need access to the cameras adjacent to the surgical chute twice a day, once to install and turn on before the procedures began and once to turn off and uninstall once the procedures concluded for that day. Each night the cameras would be

removed from the surgical chute in order to change the batteries and SD cards and because no activity will be occurring in the surgical area overnight. AWHC would need access once a day to the camera in the recovery pen in order to replace batteries and the SD card. Once there are no more mares are in the temporary holding area, that camera will no longer be needed. AWHC would also need access to the cameras in the outdoor holding pen once a day to change the SD cards and batteries in the cameras monitoring the mares as they recover. Once the mares are finished with the seven-day recovery period, AWHC would permanently remove the cameras.

AWHC selected these cameras specifically because they are small and unobtrusive, can record high quality images, are easy to maintain, and can be installed and removed without damage to the facility. The Groups ask that the BLM allow these cameras at the facility in Hines, Oregon, during the surgeries and while the mares are recovering so that the Groups can compile images to ensure that the mares are treated with the utmost care and attention and to show the public what is occurring in the facility. These cameras, and the footage they collect will allow BLM personnel, the public, and media to monitor the treatment of the horses during the surgeries and recovery period of this study. The BLM's narrative of the procedure is insufficient, and the public has a constitutional right to see a complete visual depiction of the procedures.

As BLM is aware, ovariectomy via colpotomy has been recorded in the past. For example, a veterinarian upon whose expertise BLM has previously relied, Dr. Leon Pielstick, has performed this procedure while being recorded by a group of observers. Likewise, BLM itself disseminated videos of ovariectomy via colpotomy in association with the 2018 proposal to undertake a substantially similar experiment (albeit a highly sanitized and edited video that arguably does not provide an accurate depiction of the procedure — e.g. with calming music playing throughout the video (instead of hearing vocalizations from the mare), and by only providing one angle from which it is difficult to discern the mare's reactions during the procedure).

Likewise, the presence of small, unobtrusive cameras would in no way present any impediment to the BLM's stated "overriding interests" in safety or in "effectively and efficiently" performing the experiments. Indeed, at the hearing on the Groups' previous motion for a preliminary injunction, the Court expressed incredulity at the government's assertion that cameras could be a safety hazard, and ultimately found that BLM's restrictions on the placement of cameras were not narrowly tailored to serve any overriding interest. (Attachment 9, at 45, 57).

Accordingly, the Groups request that BLM allow for the use of small, unobtrusive cameras to be installed at the locations denoted in the attached photographs.

3. Allow for Scientific Observations of the Welfare of Mares Recovering from Surgery.

As BLM is aware, a previous iteration of the proposed experiment featured oversight from specialists at CSU, including the use of a composite equine pain score to evaluate the welfare of mares recovering from surgery in an objective, scientific manner. However, after CSU withdrew from the previous iteration of the proposed experiment, BLM simply abandoned that aspect of the experiment. As the Groups noted at that time, BLM's abandonment of these scientific welfare observations was arbitrary and capricious.

Now that BLM proposes again to proceed with experiments on ovariectomy via colpotomy without any scientific welfare monitoring similar to what CSU would have provided, the Groups reiterate that this decision lacks any basis in logic and is an inexplicable and arbitrary and capricious reversal of agency position. BLM's stated reasons for abandoning this inquiry are as follows:

> (1) CSU researchers are not affiliated with this project; (2) that pain-scoring system CSU proposed for use was developed for domestic horses and its applicability for scoring wild horses is unknown, and (3) that pain-scoring research does not change the protocols BLM is using to assess and address any pain in connection with surgeries.

EA at 22.

This reasoning lacks merit. First, the fact that CSU researchers are not affiliated with this project does not offer any explanation for why BLM has now twice refused to even attempt to undertake a similar pain-scoring. Second, BLM's stated reasoning that the pain-scoring system was designed for domestic horses does not explain why BLM is refusing to use it; by partnering with CSU to undertake this pain-scoring in the first instance, BLM has already determined that it is credible and appropriate for use in evaluating wild horse pain. BLM may not now attempt to discredit the very pain-scoring system that the agency itself proposed to undertake in partnership with CSU only a year ago. Third, the reasoning that the pain-scoring research does not change BLM's pain-management protocols is not relevant. The purpose of the pain-scoring research is to gather and disseminate data about the degree of suffering that mares experience as a result of ovariectomy via colpotomy. That data will be helpful to the agency and the public in determining whether ovariectomy via colpotomy can be considered an appropriate or socially acceptable tool for managing wild horse populations. BLM's willful refusal to gather this data, which is indisputably relevant to whether BLM should use this procedure on wild horses, is arbitrary and capricious.

Because BLM itself refuses to undertake any scientific, rigorous measurement of the welfare of mares in recovery from the agency's surgical experiments, under the agency's current proposal no experienced, independent observer will be present to note or provide the public with an objective, independent account of the degree to which BLM's experiment subjects wild mares to pain and suffering.

Accordingly, the Groups request that BLM allow them to undertake a scientific, objective measurement of the welfare of mares in recovery. The Groups would identify a veterinarian, research scientist, or animal welfare specialist to observe the mares in recovery. This observer would undertake the scientific monitoring of mare welfare that CSU would have provided. The independent observer the Groups provide would fulfill the same role, observing three times per day for seven consecutive days. The independent observer's presence will not threaten the health or safety of the horses or BLM staff.

As previously approved by the BLM, the CSU staff was planning to use the following pain score

chart in their observations.

Table II-1. Composite Equine Pain Scale, derived from Gleerup and Lindegaard (2016). Each behavior category would be given a score, and the total would be recorded.

	Score				
Behavior category	**0**	**1**	**2**	**3**	**4**
Pain face	No pain face		Pain face present[1]	Intense pain face[1]	
Gross pain behavior	None		Occasional[2]		Continuous[2]
Weight bearing	Normal posture and weight bearing	Foot intermittently off the ground/occasional weight shift	Pinched (groove between abdominal muscles visible)	Continuously taking foot off the ground and trying to replace it	No weight bearing. Abnormal weight distribution
Head Position	Foraging or high	Level of withers	Below withers		
Attention towards the painful area	Does not pay attention to painful area		Brief attention to painful area (e.g. flank watching)		Biting, nudging, or looking at painful area
Response to food	Takes food with no hesitation	Looks at food		No response to food	

[1] As described by Gleerup and Lindgard (2015); [2] As described by Bussières et al. (2008).

The Groups believe that the proposed chart was incomplete for several reasons and propose the following minor changes to the chart in order to ensure that the independent observer's observations of the mares in recording are standardized and as accurate as possible.

	Score				
Behavior Category	0	1	2	3	4
Subjective Pain Score	No pain.	Mild discomfort.	Slight pain.	Moderate pain.	Severe pain.
Gross Pain Behavior	None	Tightness around the eyes, lower lip/muzzle, closing eyes, grinding teeth	Occasional. Pain behavior from (4) comes and goes.	Same as severe	Continuous: Abnormal respiratory rate, sweating, no interaction with other horses, no reaction to humans.

Weight Bearing	Normal posture and weight bearing	Shifting weight sporadically, not resting hind legs.	Shifting weight often. Picking up and putting down hind legs as if trying to readjust weight often.		No weight bearing. Abnormal weight distribution.
Head Position	Foraging or high		Level with withers		Below withers
Attention Towards the Painful Area	Does not pay any attention to surgical area		Brief attention to painful area (e.g. flank watching)		Biting, nudging, or looking towards surgical area, colic behavior, stretching, dog-sitting, rubbing, etc.
Response to Food or observer.	Takes to food with no hesitation. Reacts to observer approaching.	Turns away	Looks at food. Looks at observer.		No response to food. Does not look at observer, ears back.

B. BLM Must Prepare an Environmental Impact Statement.

It is clear that BLM is required to prepare an EIS for this action because the EA will be legally insufficient. BLM failed to adequately evaluate each of the "significance" factors listed in 40 C.F.R. § 1508.27(b). These factors reveal that the environmental impacts of the BLM's proposal would inevitably be significant, thus requiring BLM to prepare a detailed EIS. 42 U.S.C. § 4332(C); see also *Ctr. for Biological Diversity*, 538 F.3d at 1220, 1223-24, 1227 (finding agency violated NEPA and vacating EA where agency failed to prepare an EIS and failed to take a hard look at significant issues); *Nat'l Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 730-37, 739-40 (9th Cir. 2001) (same).

First, as to "context," the BLM must prepare an EIS due to the long-term and short-term effects that this study could have not only on the horses of the Warm Springs HMA, but also on wild horses across the West. Indeed, BLM has made it extremely clear that this study is not limited to the Warm Springs HMA, but instead has far-reaching implications for BLM's management of wild horses across the country. For example, BLM provides context for this study by pointing to the number of wild horses on the range and in long-term holding, EA at 2. Likewise, BLM states that the context of this study includes its efforts to study various sterilization techniques, and ostensible congressional directives. *Id.* at 2–3. Similarly, BLM's first stated purpose of this study is to "manage wild horses in a way that would allow BLM to reduce the wild horse annual population growth rate and reduce the frequency of gathers to remove excess animals." *Id.* at 5. Therefore, it is clear that the agency is studying this procedure to determine if it could be a viable management tool for use on wild mares throughout the country. Indeed, BLM goes so far as to say that "[e]nough evidence exists to conclude that application of the ovariectomy via colpotomy sterilization method would be appropriate to use in wild horse management," *id.* at 5, revealing BLM's clear plans to use this

study as a justification for a wholesale change in the agency's wild horse program. Because the Warm Springs HMA is simply a test population for an untested procedure that the BLM believes could control wild horse populations generally, BLM's decision to prepare an EA here, in lieu of an EIS, is contrary to NEPA and its implementing regulations.

Moreover, as to "intensity," multiple NEPA "significance" factors are triggered by the proposed action, although the presence of only one significance factor *requires* preparation of an EIS. *See Pub. Citizen v. Dept. of Transp.*, 316 F.3d 1002, 1023 (9th Cir. 2003) ("If the agency's action is environmentally 'significant' according to any of these criteria [set forth in 40 C.F.R. 1508.27], then DOT erred in failing to prepare an EIS."); *Humane Soc'y of the U.S. v. Johanns*, 520 F. Supp. 2d 8, 20 (D.D.C. 2007) (explaining that "courts have found that the presence of one or more of [the CEQ significance] factors should result in an agency decision to prepare an EIS") (citations omitted); *Fund For Animals v. Norton*, 281 F. Supp. 2d 209, 218 (D.D.C. 2003) (same).

"An action may be 'significant' if one of these factors is met." *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1220 (9th Cir. 2008). Furthermore, "[a] determination that significant effects on the human environment will in fact occur is not essential" for an EIS to be required; "[i]f substantial questions are raised whether a project *may* have a significant effect upon the human environment, an EIS must be prepared." *Sierra Club v. U.S. Forest Serv.*, 843 F.2d 1190, 1193 (9th Cir. 1988) (emphasis added); *see also Steamboaters v. F.E.R.C.*, 759 F.2d 1382, 1393 (9th Cir. 1985) (an agency "must supply a convincing statement of reasons why potential effects are insignificant.").

The following significance factors are triggered here. Accordingly, the BLM is required to prepare an EIS on this extreme proposed action.

- **40 C.F.R. § 1508.27(b)(4)** – This factor addresses "[t]he degree to which the effects on the quality of the human environment are likely to be highly controversial."

A project is highly controversial under NEPA if a "substantial dispute exists as to [the] size, nature, or effect" of the project *Nw. Envtl. Def. Ctr. v. Bonneville Power Admin.*, 117 F.3d 1520, 1536 (9th Cir.1997). The scientific controversy surrounding the procedure itself shows why an EIS is necessary, an issue that BLM has failed to address in any rational manner. *See Nat'l Parks*, 241 F.3d at 736 ("NEPA [] places the burden on the agency to come forward with a well-reasoned explanation demonstrating why [evidence] disputing the EA's conclusions do not suffice to create a public controversy based on potential environmental consequences.").

In the draft FONSI, BLM's analysis in this section focused only on the consideration of an alternative that the agency declined to analyze in detail, PZP fertility control. Neither the FONSI nor the EA mentioned the evidence the Groups provided to the BLM each time this procedure has been presented to the public for comment. That information (incorporated by reference), and the information discussed below in this comment letter, reveal a serious controversy based on concerns among veterinarians about the ovariectomy via colpotomy procedure itself, for reasons ranging from its inhumane nature to scientific concerns about controlling pain or subsequent infection to its infeasibility for application in the field.

The fact that ovariectomy via colpotomy is "highly controversial" within the meaning of NEPA is revealed by the robust scientific and professional dispute regarding the procedure's impacts and applicability to wild horses. Indeed, many scientists and equine veterinarians have repeatedly opposed BLM's use of ovariectomy by colpotomy each time the agency has proposed it, specifically because of the procedure's serious adverse consequences. For example, Dr. Robin Kelly, an equine veterinarian with decades of experience, has stated that ovariectomy by colpotomy has a "major risk of complications and significant pain," and notes that the veterinary consensus is that any ovariectomy should be performed using more sophisticated methods and tools. (Attachment 10 at 56 Kelly Decl. ¶ 4). Dr. Kelly specifically notes the "extreme risks of bleeding, infection, abortion, and death," and notes that "[t]his procedure is outdated, and every board certified Veterinarian I have spoken with voiced extreme concern that this was even being considered for use on any mare when more humane options are available." (*Id*., p. 57 ¶ 6).

Also demonstrating the highly controversial nature of ovariectomy via colpotomy, BLM has recognized a scientific dispute over the likely effects of this procedure. In 2013, the National Academy of Sciences responded to a commission by BLM to study important scientific issues related to the agency's wild horse program, including fertility control. (Attachment 14). As BLM's current EA acknowledges, the NAS Report specifically warned BLM that "the possibility that ovariectomy may be followed by prolonged bleeding or infection makes it inadvisable for field application." EA at 80. BLM relies heavily on a 2016 study that featured a lower mortality rate. *Id*. However, the NAS's discussion confirms that there is, in fact, a scientific controversy over the likely rate of complications and mortality ensuing from this procedure, as well as the advisability of the agency using this procedure for the management of wild horse populations in the field.

Similarly, in 2015, a research review panel of the NAS reviewed BLM's substantially similar ovariectomy via colpotomy research proposal and warned that conduct of the procedure on wild (vs. domestic) horses could cause the "mortality rate to be higher than the 1% reported in the published literature" and stated that proposals for less invasive sterilization methods "would be safer – with less risk of hemorrhage and evisceration – and probably less painful." (Attachment 13, at 7).

That same NAS review panel concluded that BLM's prior, and substantially similar, proposal to experiment on ovariectomy by colpotomy "contain[ed] no science or experimentation related to technique," and that "the only novelty in this proposal is that the procedure would be performed on free-ranging rather than domestic horses." (Attachment 14 at 7). Because wild horses and domestic horses are the same species, and are differentiated chiefly by behavior, the NAS panel "did not consider this difference to be a matter of research." *Id*. Accordingly, it is clear that there is a substantial dispute over the nature of this experiment—i.e., whether it has any valid scientific basis—as well as the experiment's effects in terms of risks to individual horses and adverse behavioral impacts on individuals and herds.

Moreover, the scientific controversy regarding ovariectomy via colpotomy is based on the following risks associated with the procedure, as discussed in detail below:

- Impacts on physiology due to reduction of estrus and alteration of hormones.
- Impacts on the wild behaviors of individual horses and herds.
- Risk of infection under conditions that may not be entirely sterile.
- Risk of harm due to sedation and restraint in wild horses.
- Risks of hemorrhage, evisceration, colic and infection due to inability to provide the required post-operative care.
- The risk of post-operative pain in these mares and the BLM's inability to provide adequate post-operative pain relief.
- The feasibility of the proposed procedures for use on the range, including cost, the differentiating fact that most mares immediately coming off the range in an HMA without a PZP program will be in some stage of pregnancy, and the lack of a sterile environment for surgery.

Several equine veterinarians experienced with this procedure have acknowledged and warned about the overall impacts of ovariectomies. For example, according to Dr. Kelly, this ovariectomy by colpotomy procedure "is extremely risky due to its blind nature . . . [and i]t is inherently difficult for a surgeon to avoid severing other organs, including the bowel, and causing severe infection and internal bleeding during this blind approach." (Attachment 10 at 56 Kelly Decl. ¶ 4. Due to these risks, "[t]he veterinary community avoids ovariectomy via colpotomy as a method for spaying mares." *Id.*

Eric Davis, DVM, MS, DACVS, DACVIM, a staff member of UC Davis School of Veterinary Medicine, noted the following concerns in a conversation with AWHC:

> The particular complications of the described technique of colpotomy stem from the fact that the procedure is done by palpation only ("blind") and that the abdomen is left open for the vaginal wall to heal by second intention. When entering the abdomen through the vaginal wall or when manipulating the hemostatic and cutting device (ecraseur) to the ovary, by feel alone, it is possible to lacerate the bowel, causing spillage of gut contents into the abdomen. This would be a terminal event in a wild horse, with even small amounts of abdominal contamination would lead to fatal and painful peritonitis. Another consideration is the possibility of life threatening hemorrhage, as the ecraseur crushes the ovarian vasculature as it cuts. This can be very effective, but without a way to observe the ovarian pedicle, there is no way for the surgeon to be sure that hemorrhage has been controlled and no way to treat serious bleeding if it arises.
>
> While the incision in the vaginal wall is relatively small, it has to be big enough for the surgeon's arm to pass. As this incision would be very difficult to close with suture, it is left open to heal on its own. While the vaginal wall and mucosa are well vascularized and heal rapidly, for some time after the end of the surgery there is an open hole in the abdominal wall in which small intestine can become entrapped. Again, in a wild mare this would be virtually untreatable and would lead to a very painful death. Surgeons often restrict the exercise of mares after colpotomy, putting them in "tie stalls". This would be unfeasible in wild horses.

> To provide these mares with longer term and more profound pain prevention, it would be good to add a morphine, or morphine/detomidine, caudal epidural to the protocol. This technique is inexpensive and would be easy to administer to a sedated horse in a chute.
>
> At a minimum regular observation, by someone capable of rendering emergency euthanasia should be available.
>
> While objectively evaluating pain in non-humans is, admittedly difficult, adding a pain scoring system to the post-operative evaluation, might give a better picture of the actual condition of the mares after surgery.
>
> The issue of a potentially extended learning period for surgeons to become efficient in laparoscopic and endoscopic technique is mentioned as a reason for discarding the [alternatives] as possibilities for large scale population control. However, it should be pointed out that colpotomy, like all surgeries, also has a "learning curve", and the veterinarian who will be doing the procedures at Warm Springs has the advantage of having done a large number of colpotomies. Because the complications of failures in technique are catastrophic, the issue of teaching colpotomy surgery to a number of veterinarians should be addressed.
>
> For context: the stated mortality rate from colpotomy in this proposal is 2-3%. Though this appears a low number, it is ten times the rate expected in equine castration.

Dr. Rolfe Radcliffe, DVM, DACVS, DACVECC, a lecturer on Large Animal Surgery and Emergency Critical Care for the College of Veterinary Medicine at Cornell University stated in correspondence with the Groups that he has significant reservations about performing this technique in wild equids.

> First, colpotomy involves removal of both ovaries through penetration of the craniolateral vaginal cavity. This is potentially dangerous in any domestic horse much less wild horses where response to sedatives and analgesics would be less predictable and pain induced movement more dramatic. Second, this procedure is done blindly based upon palpation alone and not visualization which increases the risk of inadvertent injury and complications. Third, serious complications include fatal hemorrhage, damage to other abdominal structures, infection of the peritoneal cavity, eventration or herniation of intestinal structures through the surgical site of the vagina, abdominal adhesions, serious rectal or vaginal injury, abscess formation, etc… Fourth, the ability to safely and adequately restrain a wild horse, and the less predictable response to sedative drugs make this procedure more challenging in wild horses. Lastly, this method of reproductive control would be difficult to sustain, and fraught with concerns about animal welfare. I believe other methods of reproductive population control are possible in horses, including the use of vaccines to prevent ovulation.

Dr. Graham Munroe and Dr. David Moll wrote the following about the risks of this procedure even when performed in a sterile environment:

> Even today, in a controlled and well-tested clinical setting such as a veterinary hospital for domestic horses, it is widely acknowledged that ovariectomy via colpotomy has a "high frequency of perioperative complications - some of which can be life-threatening" and which include myopathy, neuropathies, wound infections, post-operative pain, and hemorrhage.[4]

Likewise, in "TheHorse.com," Dr. Michael Ball (Attachment 15) describes the risks of ovariectomy in domestic horses:

> Regardless of the method used for ovariectomy, this procedure is generally a painful one and the use of peri-operative analgesics is important. The horses often are hospitalized for 3-7 days and very carefully monitored in the immediate post-operative period for any signs of hemorrhage, which is a serious complication that can occur.

Likewise, Dr. Kelly has written in a statement (Attachment 16 at 3) about the BLM's cancelled 2016 mare sterilization experiments planned for this same herd in Oregon and her concerns about the BLM's inability to provide post-operative care to wild mares who will be ovariectomized:

> The postoperative care/management proposed for these [BLM] mares is minimal compared to significant post-operative recommendations for domesticated mares. These recommendations include keeping mares tied in a tie stall/tie line to prevent them from laying down/rolling to reduce risk of postoperative hemorrhage or herniation of bowel thru the vaginal incisions that must be left open for second intention healing. These measures are advised since excessive post-operative hemorrhage or herniation of bowel thru the vaginal incisions would not be survivable.
>
> Domesticated mares would be treated with a more aggressive antibiotic choice for 7-10 days post operatively (monitoring daily for complications). Insufficient anti-microbials could result in peritonitis (also likely not survivable). . . . The wild mares will not be provided with post-surgical pain relief, according to the study description, and presumably [will be] turned out in a communal paddock with no restraint.

Providing the confinement for safe recovery from this invasive surgical procedure that is part of routine veterinary practice is not possible in free-roaming mares, raising the risk of fatality. The wild mares targeted in this action will also not be provided with any of the critical follow-up care required for this procedure, including stall confinement, a period on crossties to prevent lying down or rolling, careful monitoring for hemorrhage, pain relief and antibiotic treatment. This

[4] (Ovary: Colpotomy, Vetlexicon Equis ISSN: 1757-8272, https://www.vetstream.com/equis/Content/Technique/teq00448.)

lack of any credible post-operative care plan or procedure is itself a source of controversy and may violate the Animal Welfare Act.

Additionally, scientific controversy exists regarding the impacts from the introduction of ovariectomized mares into wild herds. For example, Dr. Kelly has stated (Attachment 16 at 4):

> I am concerned about the use of this procedure in the wild, due to the concerning potential disruption of the normal social behaviors of post ovariectomized mares and how this will affect their role within the herd once they return to their families. According to the reproductive specialist I consulted, while estrogen is secreted by multiple tissues, progesterone is only produced by the ovaries. Since progesterone is the hormone that prevents mares going into estrus, ovariectomized mares frequently act like they are in heat all the time. Putting ovariectomized mares back on the range could create social havoc within wild herds. Stallions instinctively know which mares are fertile/receptive and which are not. The stallion's job is to breed and impregnate mares after they deliver. If he has a number of ovariectomized mares in his harem who act like they are in estrus continuously but cannot become pregnant, or some of the time would not accept his 'advances,' the stallion's social behaviors could be severely disrupted or "over used" inappropriately. In addition, ovariectomized mares may act sexually but may not want to breed, raising the potential for serious kick injuries to stallions and mares if a stallion attempts to breed an unreceptive mare. Ovariectomized mares may also lose their status within the mare band. 'Lead' mares would be unlikely to retain that position post-ovariectomy. Social ostracism is certainly possible for these post-operative [mares] if they are no longer accepted by the herd.

Likewise, Dr. Allen T. Rutberg, a faculty member at the Tufts/Cummings School of Veterinary Medicine and a wildlife biologist and researcher who has extensively studied wild horse behavior, has described the detrimental effects of sterilization on the natural free-roaming and social behaviors of these herds (Attachment 17):

> Wild horses typically live in reproductive bands consisting of adult mares, their dependent offspring, and one or more stallions who[se] lives revolve around trying to protect mares from harassment by other stallions and securing exclusive reproductive access to the mares for themselves; …[m]ares, meanwhile, simultaneously bond to one another and compete with each other for access to water, food, and other resources for themselves and their foals. Neither geldings nor spayed mares participate in these fundamental processes of wild horse behavior.

Equine veterinarian Dr. Pamela Corey also described the shortcomings of the proposed surgical protocol such as how it inadequately mitigates the risks and impacts to mares involved in these experiments. (Attachment 18). None of the following issues are adequately addressed or analyzed in the EA:

- The surgery is done blindly through the vagina into the abdominal cavity and this has numerous risks of error, many of which can be fatal to the horse. The plan is to observe

the mares from a distance after surgery and administer an NSAID, Banamine, if necessary.

- The examination by rectum with or without ultrasound by an equine veterinarian is one of the top 3 reasons for veterinary malpractice cases as it has a significant risk of complications namely rectal tearing, sometimes with peritonitis. Each of the wild mares will require at least two of these rectal exams.

- The anesthetic protocol includes ketamine, a dissociative anesthetic that can cause the horse to lose consciousness. The horses will be kept in the standing position during the surgery. Risks to horse and human handler exist if a horse collapses in the stocks.

- One dose of antibiotic (4-day duration) and a NSAID will be given before the mare is released to a pen for observation. It is a known effect of flunixin (Banamine) that it may mask pain. Repeated dosing can cause harm to other organs (stomach, kidneys) and may hide more serious problems in the animal. Some post op problems that may be masked for a prolonged period of time by repeated use of flunixin can ultimately end in euthanasia. This type of post op "care" is considered and termed "herd management" as opposed to individualized medical monitoring. In unhandled horses this would be viewed as leading to substandard welfare outcomes because the individual may not receive sufficient or appropriate pain management.

- The use of a surgical incision and visceral manipulation including ecraseur use will cause pain. The use of anesthesia including detomidine and ketamine directly negates any assumption that the mares will only experience slight pain or distress.

- Morbidity, meaning serious complications, may include the following potential risks with colpotomy: pain and discomfort; injuries to the cervix, bladder, or a segment of bowel; delayed vaginal healing; eventration of the bowel; incisional site hematoma; intraabdominal adhesions to the vagina; and chronic lumbar or bilateral hindlimb pain. Evisceration is also a possibility. Most of these complications may go unseen because participants will be "observing post-op horses from a distance."

Further, ovariectomies have been shown to have a high complication rate under sterile conditions and ovariectomies via colpotomy are even more suspect. According to the University of Kentucky (Attachment 19):

> Although effective, the procedure can be accompanied by a high rate of complications (approximately 4% in one study) due primarily to excessive hemorrhage from the ovarian pedicle, and such complications were described in the NRC report as severely limiting application of ovariectomy through a colpotomy approach in addressing the needs for controlling fertility in wild equids.

The Burns Corrals facilities are not sterile, and thus the procedural risks are even higher than the already demonstrable risks of performing the procedure in a clean hospital environment. Expert

equine veterinarian Dr. Don Moore stated in correspondence with the Groups that many professional veterinarians would not even *consider* ovariectomy via colpotomy as an option.

> In private practice, colpotomy is considered an inferior procedure with likelihood of post-surgical infections and complications (i.e. colic) especially in unsterile conditions. Post-operative care usually lasts several days to often weeks and mares are in most cases monitored in box stalls or cross ties, which cannot be accomplished with wild mares.
>
> Any veterinarian(s) who would perform these experiments is in violation of the oath taken as a graduating veterinarian, 'above all else, do no harm.' If a veterinarian in private practice performed these procedures in the manner described in [the EA], they would most certainly be reported to and disciplined by the regulatory board of that state. Disciplined would likely mean suspension of that veterinarian's license to practice in that state.

In an article for Practical Horseman, Dr. Peter Knox, DVM explicitly warns against the dangers of this type of ovariectomy, stating (Attachment 20):

> I do not recommend an ovariectomy procedure called a colpotomy. This is done "blindly" (without a laparoscope) through the vagina. **Even when performed by very experienced surgeons, it has an increased risk of accidental injury to other organs, bleeding and post-surgical colic**. (emphasis added).

The Cloud Foundation's own equine veterinarian, Dr. Lisa Jacobson, also expressed serious concern about ovariectomy via colpotomy in conversations with the Groups. Dr. Jacobson fears that complications including infection, bleeding from a severed artery, and prolapse of the intestines would most likely result in death for at least some of the mares.

Accordingly, there is a clear scientific dispute regarding whether "spaying," especially by ovariectomy via colpotomy, is an appropriate management tool for wild horses due to the pain entailed, behavioral changes and social disruption it will undeniably cause when implemented on the range, as well as the health risks this surgical procedure poses for mares and young foals that belong to mares subjected to this experiment.

Furthermore, Simone Netherlands, president of the Salt River Wild Horse Management Group attended a workshop in 2015 where Dr. Pielstick operated on burros and a horse. (Attachment 10 at 96-99 Netherlands Decl.). Dr. Pielstick conducted this very procedure on five burros and one domestic mare during this workshop. The mare died of evisceration and one burro bled to death. Ms. Netherlands and Suzanne Roy, Executive Director of the American Wild Horse Campaign, spoke with the Director of the wildlife center that sponsored the workshop and learned that in addition to the deaths, three burros had serious infections and required intensive veterinary care to survive after participating in the workshop. Ms. Netherlands documented her observations from that workshop:

> The environment was by no means sterile…. The horse surgery was performed in the barn, while the burro surgeries were performed outside in the chute and the castrations on the ground. There were two flank incisions and the rest were vaginal surgeries (colpotomy) on the Jennies.
>
> To be noted: these were once wild burros but they were now tame. In my own experience, wild burros and especially wild horses have enormous survival instinct, which produces large amounts of adrenaline in a stressful situation, which makes sedating them difficult….The horse did not react as much as the burros to the surgery itself. This was a domestic mare and former performance horse, whereas the burros were once-wild animals.
>
> The vaginal surgeries caused a surprising amount of bleeding, given that Pielstick said the incisions were small. When he removed his hand, his gloves were covered in blood and blood could be seen dripping from the animals' vaginas (visible on the video).
>
> Dr. Pielstick repeatedly noted that the flank surgery was safer than the vaginal surgery because the incisions could be sutured. He stated that he had lower mortality from the flank approach than the vaginal surgery.
>
> After doing the surgery on the horse, he gave instructions on her aftercare. He stated that it was very important to tie the horse to the side of her stall tightly for the duration of the rest of the day and night to prevent her intestines from coming through the incision. She was absolutely not allowed to lie down. She was tied tightly against the stall wall after the surgery and was still that way when I checked on her before I left.
>
> Dr. Pielstick did not provide aftercare to the burros even though some did not appear to be doing well post-surgery. I expressly asked him about the discharge from the nose and he repeated that they will be fine. I also asked why the mare had to stand up and the burros didn't and he stated that it was impossible to make the burros stand up throughout the night.

Dr. Corey provides still more evidence of a serious controversy over the nature and applicability of ovariectomy via colpotomy on wild horses, as well as the nature of BLM's proposed experiment (Attachment 18 at 2):

> This is an experiment that belongs to another era or a third world country. Veterinary medicine should strive to be more advanced in 2019 and should consider the welfare implications of the known risks and complications. I am appalled that this experiment will have any component of medical teaching to veterinarians. These risks aren't acceptable to the majority of horse owners. Equine veterinarians would rarely suggest this as a field surgery and equine specialty hospitals exist for this purpose and pride themselves on providing state of the art veterinary medical and surgical care to horses. American wild horses should not endure outdated

> medical procedures in conditions that will cause suffering. That veterinarians can condone this experiment shows a divide in beliefs regarding the acceptable use and welfare of the species we spend our lives helping and healing. These animals deserve better.

Likewise, bioethicist Dr. Jessica Pierce noted ethical concerns about the BLM's proposed study in correspondence with the Groups:

> As a bioethicist with several decades of experience in animal ethics and research ethics, I find the BLM's proposed plan to conduct surgical sterilization on a group of wild mares in Oregon deeply disturbing. The proposal violates a number of fundamental ethical protections for animals: the experimental procedure imposes significant welfare compromises on the horses, and carries considerable risk of pain, infection, and potential for suffering, without any identifiable benefit for the individual horses or for their herds. Furthermore, safer and more effective strategies for managing wild horse populations–including methods of chemical sterilization–already exist. I can see no good justification for using an outdated and risky method when better alternatives are readily at hand.

In light of this abundant evidence of a scientific dispute regarding the nature and effects of BLM's experiments on ovariectomy via colpotomy, there can be no legitimate dispute that the proposed action will be highly controversial and requires an EIS on this basis.

- **40 C.F.R. § 1508.27(b)(8)** – This factor is triggered if "the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

In the WHA, Congress declared that "wild free-roaming horses and burros are living symbols of the pioneer spirit of the West" and "enrich the lives of the American people," 16 U.S.C. § 1331. Over forty-five years later, the American public continues to cherish wild horses. Congress sought to protect wild horses because of their cultural value, which in turn depends on the natural behaviors in which wild horses engage. Likewise, the NAS Report found that "[h]orses maintain immense cultural value as symbols of grace, beauty, companionship, and courage." (Attachment 14). Against this backdrop, there can be no legitimate doubt that the natural, free-roaming behaviors of wild horses constitute a cultural resource within the meaning of NEPA.

Over the course of the various iterations BLM has had of these experiments, AWHC's supporters have taken action 145,702 times in the form of comments on the EAs, messages sent in opposition, and faxes sent to the Secretary of the Department of the Interior. Additionally, AWHC conducted polling (Attachment 21) which found that only 9 percent of people support the capture and sterilization via ovariectomy via colpotomy of our wild horses and 67 percent prefer the use of darts with a fertility control vaccine instead.

However, BLM's proposed FONSI fails to consider wild horses as a cultural resource. Indeed, the FONSI mischaracterizes the relevant significance factor as merely having to do with "districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register for Historic Places." FONSI at 11.

NEPA's implementing regulations are quite clear that significant effects occur based on "proximity to historic or cultural resources," 40 C.F.R. § 1508.27(b)(3), or if an action may "adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources." Id. § 1508.27(b)(8). By using the disjunctive "or," these regulations make clear that BLM may not restrict its analysis under NEPA to the more limited scope of the National Historic Preservation Act; instead, BLM must also consider whether the action would impact cultural resources. These are two separate analyses, and both are required. *See Pres. Coal. v. Pierce*, 667 F.2d 851, 859 (9th Cir. 1982) (noting that "compliance with the NHPA . . . does not assure compliance with NEPA" because "[e]ach mandates separate and distinct procedures, both of which must be complied with"). Accordingly, there is no merit to BLM's failure to consider wild horses as a cultural resource.

Because this action may have significant impacts on wild horses as a cultural resource, either through changing their behavior, by causing serious downstream health consequences, by changing herd dynamics, or by leading to a wholesale change in BLM's approach to managing wild horses, an EIS is necessary on this basis as well.

- **40 C.F.R. § 1508.27(b)(6)** – This factor addresses "[t]he degree to which the action may establish a precedent for future Action with significant effects or represents a decision in principle about a future consideration."

With this EA, the BLM is adopting the new, and significantly untested, approach of ovariectomy by colpotomy. Indeed, BLM's first stated purpose for the "spay" experiment is to "manage wild horses in a way that would allow BLM to reduce the wild horse annual population growth rate and reduce the frequency of gathers to remove excess animals." EA at 5 . As BLM states, this experiment is part of an effort to "develop and apply fertility control methods that effectively reduce the number of animals removed from the range." EA at 6. These statements leave no room to doubt that BLM intends this experiment to provide support for the large-scale deployment of ovariectomy via colpotomy on wild horses across the West—in other words, to serve as a precedent for a sweeping change to the agency's management of wild horse populations.

In the present EA, the BLM's primary statement of purpose is "to manage wild horses in a way that would allow BLM to reduce the wild horse annual population growth rate and reduce the frequency of gathers to remove excess animals (i.e., to extend the time between gathers)." EA at 5. The second primary purpose, "to study the use of ovariectomy via colpotomy as a method to slow the wild horse population growth rate in Warm Springs HMA, with spayed mares making up a portion of a self-sustaining herd and maintaining free-roaming behavior," demonstrates that the BLM has already determined the method they prefer to use to achieve the first purpose.

Therefore, it is likely that the study of this procedure will lead to further use of ovariectomy via colpotomy in wild horse "management" across the west.

Likewise, BLM has stated that "[e]nough evidence exists to conclude that application of the ovariectomy via colpotomy sterilization method would be appropriate to use in wild horse management." EA at 5. This statement reflects a "decision in principle about a future consideration"—namely the future consideration of whether to use ovariectomy via colpotomy to manage wild horse populations. Because BLM has already "conclude[d]" that this method is "appropriate," there can be no doubt that it has made a "decision in principle" necessitating an EIS.

- **40 C.F.R. § 1508.27(b)(5)** – This factor addresses "[t]he degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks."

The BLM is again considering ovariectomy by colpotomy even though there is very little known about the procedure, its effectiveness, its physical and behavioral effects on wild mares, and its side effects on herd behavior. The level of uncertainty and unknown risk is demonstrated by the BLM's choice to implement this "spay" study instead of a program using the well-tested PZP vaccine, as was thoroughly discussed in the BLM's own DNA for this HMA just a month prior to the release of this EA. The risks of the surgery are clearly unknown by the BLM, or a study of this magnitude would not be necessary. In contrast, PZP is a very well tested immunocontraceptive vaccine that has a proven success rate in wild horse management.

The two sources on which the BLM relies for implementing ovariectomy via colpotomy in this EA emphasized that mares *must be* properly handled in order for a purportedly low risk of mortality to occur. Yet, the BLM itself has never handled wild mares for the purpose of this procedure before, meaning that the harm that could befall a mare involved in this study is highly uncertain because the staff has no experience in handling the wild horses for this purpose. Further, ovariectomy via colpotomy – unlike PZP – has a longer intervention time. This means that the mares will be held for much longer, handled more and for longer periods of time, and will receive a more involved treatment when ovariectomy via colpotomy is applied. Risks to the mares increase with the intensity of the intervention.

Part of that intervention includes the holding period for one week after the procedures are performed. The study on which the BLM relied held the mares for roughly eight days after the procedure but lacked discussion and analysis as to whether any welfare observations were conducted or recorded or how the study observed the mares once they were returned to the range.

BLM's study also plans to return the spayed mares to the range for the USGS to study and analyze herd dynamics, any effects to the mares once they are returned to the range, and also in comparison to a control group of horses. However, the resource on which the BLM relies to state that there are no uncertain risks did not study the horses when they returned to the range in any meaningful way, meaning that the previous study was done without a control group or otherwise in-depth on-the-range observations. The analysis in the FONSI even questions what *could* happen when the treated mares are released. The mares *may* have more energy and *could*

increase their range, or the mares *could* keep their herd associations and there *could* be no change to their range. FONSI at 9-10. It is clear that the BLM simply does not know, and therefore the effects remain highly uncertain. Since the study proposed in this EA and FONSI includes an on-range portion, the BLM must include analysis on the highly uncertain effects and unknown risks associated with releasing treated and untreated horses out together.

Further, and importantly, the horses that BLM would use in this study have been held at the facility in Hines, Oregon for almost a full year. Aside from the BLM's conjecture that performing the surgery on all open mares carries an unknown factor that *may* reduce mortality EA at 80, BLM's analysis is completely devoid of consideration of the differences between performing this procedure on mares who were recently removed versus how this procedure would affect free-roaming horses that have been in holding for a significant amount of time. In fact, aside from BLM's own discussion which notes that the "ovariectomy via colpotomy procedure has been conducted for over 100 years, *normally on open (non-pregnant) domestic mares*" EA at 79, the agency does not discuss how adding to this assertion with the proposed study will actually help the agency evaluate the efficacy of using this procedure as a management tool on wild, pregnant mares on the range in the future. BLM can hardly support a claim that the effects on the horses are not highly uncertain or that there are no unknown risks because there is little information to fully support this conclusion included in the EA.

While the EA does note that "treating only open (non-pregnant) mares may reduce additional risks associated with the maintenance of a pregnancy," (EA p. 80) the EA is devoid of any discussion of what effects from spaying open mares with young foals would detrimentally affect the mares and foals themselves. Simply because a foal is born does not mean that it will not suffer any effects if it is still nursing and its mother is chosen to undergo the proposed surgery.

The EA is vague as to the protocol BLM plans to use when dealing with mothers that have dependent foals during the experiments. Dr. Kelley therefore provided comments to the Groups expressing concerns should the protocol seek to experiment on mares with dependent foals.

> Mares will need to be separated from their foals for the procedure and this is immensely stressful on both mares and their young foals. Consequently, mares will be much more difficult to sedate for the procedure (due to a much higher stress level) and with high stress, blood pressure levels will be very high. Mares that are recently post-partum typically have larger blood vessels in the ovarian pedicle, meaning that post ecraseur clamping/cutting they will be more likely to bleed. (As I have already stated in the prior complaints about Colpotomy management of wild mares as a form of birth control. Colpotomies have a high risk of bleeding and in fact some mares may die from exsanguination as a result.)
>
> While foals are separated from their mothers, they will be more prone to injury because they will be highly stressed since separated from mom. Youngsters tend to gallop wildly around when mom is taken away, as they have absolutely no idea why they were abandoned. Therefore, injury risk is higher in this case and most tend to not eat and drink normally during this separation time, so there is also a risk of colic secondary to dehydration. Risk of infection is also much higher for foals in these holding pens due to

the concentration of having so many horses and some are unavoidably sick. Since horses are not normally vaccinated until they are 4 months of age, all of these foals are immunologically immature and therefore more susceptible to respiratory infections, diarrhea, etc.

When the mares are eventually returned to their foals, they will be heavily sedated still, and they will not interact normally with their babies. Often mares will kick and react adversely because the sedation affects their ability to discern threat from their foals attempting to nurse. It is not uncommon to observe a heavily sedated mare kicking her foal because of this altered state of consciousness.

Once the sedation has worn off, since the BLM project provides very limited post-operative pain relief and antibiotics, the mares can commonly suffer from post-surgical "colicy" pain (pain in their abdomen) after a brutal surgical procedure like a Colpotomy. Similar difficulties to those observed when a foal attempts to nurse from a sedated mare, painful mares are not commonly easy for foals to nurse from. When mares get very painful, they are incessantly rolling and in distress and that behavior will make it impossible for a foal to nurse.

Dr. Robin Kelley also notes other concerns about involving foals that are still dependent on their mothers:

Foals that are one to two months old really depend on mother's milk for not only nutrition but important hydration. Babies in this age group never drink from water troughs (used to a mare's nipple), so they will not be able to drink adequately during the surgical procedure and time they will be separated from mom. Considering this project will be done in August, when the temperatures can be very high, dehydration for mothers and foals will be an issue for both mares and foals.

When mares go through a very painful surgical procedure, and are not provided with appropriate pain-relieving medication, it commonly they will not let their foals nurse. Then, within a few days, the stimulus to the mare's hormonal milk production will encourage her to "dry up" and eliminate her ability to feed her foal(s). In some cases, a mare will allow another mother's foals to nurse from them if they are not producing milk, but this will also potentially be compromised because of the procedure.

Foals who are three to four months of age may be able to adequately adapt to a hay diet, but normally foals will nurse up to six months of age. In the wild if forage is not adequate it is very likely that foals will nurse longer. Foals who are younger will be at much greater risk of complications because there is no guarantee their mothers will produce adequate milk after this very stressful, painful procedure.

If BLM decides a mare needs to run through the chute for further medication and/or evaluation (since post-operative complications with this procedure are common) separating the mother and foal yet again will be highly stressful to both of them and complicate their bond further. Mares and babies separated from one another tend to react

> much more protectively and potentially aggressively which certainly increases risk of injury to both.

The Groups were also recently made aware that the BLM plans to use a mother who recently gave birth to twins for the study. If this mare is chosen to receive the spay procedure, the mother and twins will endure much higher risks. Dr. Kelley explained to the Groups that,

> The mare with the twin babies is in fairly poor (thin) condition. Mares in poor condition are already struggling to produce enough milk to support two foals. She is in drastic need of having an extremely high caloric diet be provided (pelleted hay and grain to be specific, since she likely has never had her teeth floated). A pelleted diet is much easier to consume for a mare like this, but it doesn't appear the BLM is providing this option.

BLM even refused a sanctuary's offer to foster the mother and her twins in order to provide this extra dietary care to them. Instead, the mare and foals remain at the holding facility, where the foals are now undoubtedly nutritionally compromised because it is questionable, at best, whether the BLM has provided the mare with the adequate nutritional value she needs in order to properly care for two foals.

Further, Dr. Kelley notes that the mare with twins is at a higher risk for use in the surgical portion of the study and that the mere consideration of putting this "mare with two young foals through this project is unethical since the mare's risk of complications is greater and her foals are both too young to survive on their own. As a doctor of veterinary medicine with 36 years of experience, in my professional opinion this mom and her babies should be considered to go to a sanctuary (that is apparently ready, willing and able to take all three)."

At bottom, the BLM has not considered and as such is uncertain how the surgeries will affect mothers with foals at their side. Weaning the foals is not an option because weaning the foals too young places them at risk. They should stay with their mothers as long as possible to receive the best care and nutrition. However, the surgeries may have negative effects on this essential relationship that have not been discussed in the EA.

Finally, while it appears BLM has one source to garner information about the anticipated body condition of treated mares as compared to untreated mares, one study in no way makes the information the agency provided certain nor eliminates the potential for unknown risks to exist. Further, the study did not record the welfare of foals, as the current experiment should seek to do. While the study did note that treated mares are likely to be unburdened by lactation, the agency has no information to understand what this will mean for foals of treated mares. Highly uncertain effects that could occur include when the lactation will end, what the quality of any milk production after the surgery will be, the effects on the development of foals of treated mothers (i.e. their body scores, their growth, etc.), pain from nursing, holding mares with young foals in a pen with other mares and other foals, and how these unknown effects will interact in a situation where untreated mares are present. Foals may incur unknown effects such as injury if the foals are harmed by their mother or another treated mare or starve without an adequate food source. Without more information on the effects on and risks associated with this procedure on

both the mares and any associated foals, there is no way the agency can claim that the procedure's effects are not highly uncertain or that the risks are all known.

- **40 C.F.R. § 1508.27(b)(10)** – This factor is triggered if "the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment."

BLM's proposed ovariectomy experiment threatens a serious violation of the WHA. As described above, one of Congress's primary goals in enacting the WHA was to protect wild horses from various types of adverse impacts, including those that harm their wild and free-roaming behaviors. 16 U.S.C. § 1331. There can be no legitimate dispute that ovariectomy by colpotomy risks serious adverse impacts to the wild and free-roaming behaviors of individual horses and the herds to which they belong. While the Groups recognize that the WHA was amended in 2004, Congress has never approved funding for the sterilization of wild horses and burros. In fact, most recently Congress blocked funding for mass sterilization and management of single-sex herds in the FY2019 Interior Appropriations bill. While the FY19 House Committee Report[5] did encourage consideration of sterilization, broadly speaking, as a management tool, nowhere in the report or final language of the Omnibus Bill did Congress instruct the agency to carry out, or provide funding for, this brutal and inhumane sterilization by ovariectomy via colpotomy; there are other methods the agency can continue to consider which are objectively more humane. Accordingly, this experiment threatens a violation of the WHA.

Additionally, the WHA mandates that "[a]ll management activities shall be at the minimal feasible level." 16 U.S.C. § 1333(a). Ovariectomy by colpotomy falls far short of this legal requirement. Not only is ovariectomy by colpotomy far more invasive, inhumane, and risky than other non-surgical methods of fertility control such as PZP, but it is also far more invasive and inhumane than the techniques that veterinarians use on domestic horses in the rare circumstances that ovariectomy is clinically necessary. (Attachment 10, at 53 Kelly Decl. and 60 Corey Decl.). Because ovariectomy by colpotomy is a far more invasive and inhumane surgical procedure than other methods of fertility control, it cannot be said to constitute the minimal feasible level of management in accordance with a statute that aims to protect wild horses. Fundamentally, because this experiment's *purpose* is to study and evaluate the safety, morbidity, and feasibility of ovariectomy via colpotomy (spay) on wild horse mares and to allow the USGS to evaluate the *impacts* of spaying on mare and herd behavior once returned to the range as compared with an untreated herd"—i.e. *the purpose of the experiment is to take an action that foreseeably will likely harm horses and evaluate the severity of that harm*—BLM's "spay" experiment is inherently inconsistent with the fundamental Congressional intent in the WHA to "protect" wild horses. *See* 16 U.S.C. § 1333(a). Accordingly, for various reasons, this experiment threatens a violation of the WHA.

Further, it is well known that ovariectomy has a high risk of changing the behavior of a mare. According to the University of Florida College of Veterinary Medicine, while reactions depend on the individual, and while it's *possible* a mare may continue to have a normal estrus cycle, it is

[5] By the same token, the FY19 Senate Committee Report noted the need for "politically viable" solutions – a bar that the ovariectomy via colpotomy experiments would be unlikely to meet.

likely that this procedure will result in one of three behavioral changes: the mare will not experience estrus at all; she will continue to experience estrus irregularly; or she will "appear to be permanently in estrus" (Attachment 22). Any one of these changes are sure to change the dynamics of the herd, since the success of the stallion's invitation to breed is dictated by the estrus-pattern of mares. If a mare shows no sign of estrus behavior, she will likely not be receptive to the stallion's breeding invitation, possibly resulting in frustration of both the stallion and the mare. (See Attachments 23 and 24). On the other hand, mares that end up sterilized, but in permanent estrus tend to be bred continuously by stallions. Mares with this reaction (called "teaser" mares) are frequently used to stimulate stallions for artificial insemination programs and for breeding soundness exams. In post-op wild mares, repetitive breeding can lead to physical damage, re-opening the vaginal incision and introducing infection, hemorrhage and/or evisceration. These mares will not have completely healed from surgery before being released into the wild and will be exposed to the traumatic and painful experience of being bred over and over again.

Finally, the implementing regulations of the WHA require that "wild horses and burros shall be managed as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat." 43 C.F.R.§ 4700.0-6(a). Additionally, "activities affecting wild horses and burros shall be undertaken with the goal of maintaining free roaming behavior." *Id.* at § 4700.0-6(c). Sterilization destroys those aspects of wild horse behavior, developed over millions of years of evolutionary history in North America and as such does not honor the purpose illustrated by these implementing regulations.

Likewise, BLM's express refusal to consider the social acceptability of ovariectomy via colpotomy—or to collect data on mares' post-surgical welfare, or to allow for meaningful independent public observation—threaten a significant violation of the WHA. As described above, Congress enacted the WHA precisely because of the social and cultural importance of wild horses. *See* 16 U.S.C. § 1331 ("Congress finds and declares that wild free-roaming horses and burros are living symbols of the historic and pioneer spirit of the West" and "that they contribute to the diversity of life forms within the Nation and enrich the lives of the American people"). Further, in enacting the WHA, Congress mandated that in deciding whether to sterilize wild horses BLM "shall consult" with the National Academy of Sciences ("NAS") and individuals with expertise in wild horse protection. 16 U.S.C. § 1333(b)(1).

BLM has twice commissioned the NAS to issue comprehensive reports on BLM's program of wild horse management, and each time, the NAS has reaffirmed the critical importance of considering the social acceptability of the agency's methods for managing wild horse populations. "In 1982, the National Research Council noted that public opinion was the 'major motivation behind the wild horse and burro protection program and a primary criterion of management success." (Attachment 14). In 2013, in response to a BLM commission, the NAS issued a comprehensive report, *Using Science to Improve the BLM Wild Horse and Burro Program: A Way Forward*, which contains an entire chapter on "Social Considerations in Managing Free-Ranging Horses and Burros." *Id.* In this 2013 report, the NAS reaffirmed its 1982 finding and noted that this "suggest[s] that control strategies must be responsive to public attitudes and preferences and could not be based only on biological or cost considerations." *Id.* The NAS specifically recommended "conducting research to understand stakeholder values," *id.*,

and stressed that "policy to manage the free-ranging population should be carefully attentive to divergent public values[.]" *Id.* at 240. The NAS Report considered four methodologies for considering public input and recommended that BLM take the public's concerns seriously—i.e. that it consider whether its proposed actions are socially acceptable.

As is particularly relevant here, the NAS noted that "[i]n a participatory process, stakeholders may participate in the setting of goals, design of experiments, monitoring and interpretation of results, and adjustment of management practices to various degrees that depend on the situation." *Id.* at 450. Here, however, BLM has disregarded the explicit and repeated exhortations from the Groups and the public to consider whether this proposed action is socially acceptable, or to design the experiment in such a way as to obtain information that can meaningfully be used to assess social acceptability.

Likewise, "[f]or more than a decade, the National Research Council has urged an approach to environmental and resource-management problems that has come to be called analytic deliberation." *Id.* at 251. This "approach emphasizes the importance of sound science but also recognizes that there will be multiple views on the part of the public and that the public can be skeptical of scientific analysis applied to policy and management decisions." *Id.* at 251–52. The NAS noted "[a] substantial body of research" shows the efficacy of this approach, and the existence of "substantial literature describing the design of the analytic-deliberative process." *Id.* at 252. The NAS offered specific recommendations for implementing this approach in the wild horse and burro context, including considering "[w]hat are the differences in values, interests, cultural views, and perspectives among the parties?" as well as whether the participants are "polarized on the issue." *Id.* at 253. Likewise, the NAS recommended that BLM grapple with "significant problems of trust among the agency, the scientists, and the interested and affected parties." *Id.*

Ultimately, the NAS Report stressed that "given the high level of public concern regarding the management of free-ranging horses and burros, the diverse values that come to bear on the issue, and the substantial scientific uncertainty that is inevitable in dealing with such complex issues, *effective public-participation practices are essential.*" *Id.* at 254 (emphasis added). Likewise, the NAS Report emphasized that "*BLM should engage with the public in ways that allow public input to influence agency decisions*." *Id.* (emphasis added). Indeed, as is directly relevant here, the NAS Report noted that BLM could use the methodologies described in the Report to "figure out how to sterilize the right number of animals each year and in each location to achieve an unknown ideal free-ranging population while minimizing the number of animals gathered and put into holding facilities," and that the methodologies the NAS proposed "could help to clarify issues of public concern while informing the public about the issues that BLM faces." *Id.* at 255.

The NAS Report concluded that "[h]orse and burro management and control strategies cannot be based on biological or cost considerations alone; management should engage interested and affected parties *and also be responsive to public attitudes and preferences*." *Id.* at 259 (emphasis added). The NAS reiterated that "…the National Research Council reported that public opinion was the major reason that the Wild Horse and Burro Program existed and public opinion was a primary indicator of management success," and that "*[t]he same holds true today*." *Id.* (emphasis added). The NAS Report further concluded that:

> The committee believes that attempts to resolve polarized public values and opinions should draw on the principle of community-based public participation and engagement in decision-making, an analytic-deliberative process that engages lay people and experts in a constructive consideration of management options.

Id. The NAS Report specifically "conclude[d] that the analytic-deliberative [methodological] approach is the most appropriate for use in the Wild Horse and Burro Program." *Id.* The NAS Report reasoned that this methodology could "improve the quality of agency decisions," and is "particularly relevant to resolving the conflicts surrounding the Wild Horse and Burro Program because it is founded on the principles of inclusiveness of participation, collaborative problem formulation and process design, transparency, and good-faith communication." *Id.*

It is clear that BLM has, at a minimum, an obligation to consider the findings from the NAS Report *that BLM itself commissioned.* Thus, in *AWHPC v. Jewell*, No. 1:16-cv-00001-EJL (D. Ida.), the Court struck down the approach of creating sterile herds of wild horses in part because the agency failed to consider relevant input from this same NAS Report. (Attachment 25). Among other issues, the judge ruled that sterilization removes an animal's ability to be wild, destroying the essence of the animal:

> [P]reventing births and reproductive capacity of the horses alters wild horse behaviors and the social structure of the herd…. The NAS Report concluded that 'absence of young horses itself would alter the age structure of the population and could thereby affect harem dynamics.'
>
> The Defendants decision to manage the herd as entirely non-reproducing is arbitrary and capricious. The BLM failed to consider the impacts of maintaining the herd as non-reproducing and whether those impacts were consistent with the requirement that the herd maintains its free-roaming behavior.

Here, although BLM itself commissioned the NAS Report and has cited it regarding other aspects of this decision, the agency has failed to consider the NAS Report's indisputably relevant findings regarding the importance of taking public opinion into consideration, as well as its specific findings regarding the appropriate methodologies for doing so. Instead, BLM has retreated from its previous finding that social acceptability is a key component of "the ultimate question" about how to manage wild horses, and now explicitly refuses to consider this issue. BLM's explicit refusal to consider social acceptability—particularly without any effort to discuss the findings or methodologies in the NAS Report—is arbitrary and capricious and a violation of the Wild Horse Act. *See* 16 U.S.C. § 1333(b)(1) (requiring BLM to consult with the NAS).

Likewise, at every possible juncture, the Groups—and especially Ms. Kathrens, the Humane Advocate on BLM's own Wild Horse Advisory Board—have stressed the importance of considering the social acceptability of the agency's actions. *See* Attachment 8, Kathrens Decl.; Roy Decl. Because the Groups indisputably have expertise in the protection of wild horses, as BLM itself has recognized by appointing Ms.

Kathrens to serve on the Advisory Board, BLM is under an express congressional mandate to consider their input when deciding whether to sterilize wild horses. *See* 16 U.S.C. § 1333(b)(1). The agency's refusal to consider social acceptability despite the comments from the Groups and the NAS Report's findings is arbitrary and capricious and a violation of the WHA.

In short, an EIS is required when even *one* of these factors is implicated. Because at least *five* significance factors are triggered here, it is wholly inconsistent with NEPA and its regulations for BLM to prepare only an EA. Therefore, it would be a patent NEPA violation if BLM refused to prepare an EIS here. For all of these reasons, an EIS is required for this action.

C. BLM Must Consider All Reasonable Alternatives.

Irrespective of whether an EIS or EA is appropriate under the circumstances, pursuant to NEPA, BLM must analyze all reasonable alternatives to the proposal of removing the ovaries of nearly 100 mares. The "heart" of the NEPA process is an agency's duty to consider "alternatives to the proposed action" and to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. §§ 4332(2)(C)(iii), 4332(2)(E). The Council on Environmental Quality regulations require the action agency to: (a) rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated; (b) devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits; (c) include reasonable alternatives not within the jurisdiction of the lead agency; (d) include the alternative of no action; (e) identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference; and (f) include appropriate mitigation measures not already included in the proposed action or alternatives. *Id.*; *see also* 43 C.F.R. § 46.415(b).

"A 'viable but unexamined alternative renders [the] environmental impact statement inadequate.'" *Muckleshoot Indian Tribe v. U.S. Forest Serv*., 177 F.3d 800, 814 (9th Cir. 1999) (quoting *Citizens for a Better Henderson v. Hodel*, 768 F.2d 1051, 1057 (9th Cir. 1985)). "The purpose of NEPA's alternatives requirement is to ensure agencies do not undertake projects "without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means." *Envtl. Defense Fund, Inc. v. U.S. Army Corps of Engrs.*, 492 F.2d 1123, 1135 (5th Cir. 1974). The courts, in the Ninth Circuit and elsewhere, have consistently held that an agency's failure to consider a reasonable alternative is fatal to an agency's NEPA analysis. *See, e.g., Idaho Conserv. League v. Mumma*, 956 F.2d 1508, 1519-20 (9th Cir. 1992) ("The existence of a viable, but unexamined alternative renders an environmental impact statement inadequate.").

If the agencies reject an alternative from consideration, they must explain why a particular option is not feasible and was therefore eliminated from further consideration. 40 C.F.R. § 1502.14(a). The courts will scrutinize this explanation to ensure that the reasons given are adequately supported by the record. *See Muckleshoot Indian Tribe*, 177 F.3d at 813-15, *Idaho*

Conserv. League, 956 F.2d at 1522 (while agencies can use criteria to determine which options to fully evaluate, those criteria are subject to judicial review), *Citizens for a Better Henderson*, 768 F.2d at 1057.

1. BLM has stated an unreasonably and unlawfully narrow purpose and need for this action.

As noted in *City of Carmel by the Sea v. U.S. Dep't of Transp.*, 123 F.3d 1142 (9th Cir. 1997):

> Project alternatives derive from an Environmental Impact Statement's "Purpose and Need" section, which briefly defines "the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. § 1502.13. The stated goal of a project necessarily dictates the range of "reasonable" alternatives and an agency cannot define its objectives in unreasonably narrow terms. *See Citizens Against Burlington*, 938 F.2d at 196.

An agency "may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency's power would accomplish the goals of the agency's action, and the [NEPA process] would become a foreordained formality." *Nat'l Parks & Conservation Ass'n v. BLM*, 606 F.3d 1058, 1070 (9th Cir. 2010). Courts "evaluate an agency's statement of purpose under a reasonableness standard." *Id.*

In the present EA, the BLM's statement of purpose and need is unreasonably narrowed by the second primary purpose which focuses the agency solely on ovariectomy via colpotomy. The first primary purpose is "to manage wild horses in a way that would allow BLM to reduce the wild horse annual population growth rate and reduce the frequency of gathers to remove excess animals (i.e., to extend the time between gathers)." EA at 5. Yet, because of the second primary purpose "to study the use of ovariectomy via colpotomy as a method to slow the wild horse population growth rate in Warm Springs HMA, with spayed mares making up a portion of a self-sustaining herd and maintaining free-roaming behavior," the BLM determined that numerous more humane alternatives fell short of achieving the purpose of the study because each was a method other than the BLM's preferred procedure, ovariectomy via colpotomy. However, these other forms of fertility control are viable, merit study, and achieve the primary purpose of the action – to reduce the wild horse annual population growth rate and reduce the frequency of roundups. Indeed, BLM's purpose and need is unreasonably narrow, and otherwise arbitrary and capricious, because BLM has utilized it to eliminate the consideration of other, more humane methods of sterilization ostensibly because those other methods cannot be applied to pregnant mares, while at the same time noting that BLM does not intend to conduct the current research on pregnant mares and despite BLM's previous recognition that it does not know what devastating effects the ovariectomy via colpotomy procedure may have on pregnant mares. To the extent BLM believes it has a broad need to "develop and apply fertility control methods that effectively reduce the number of animals removed from the range," EA at 6, it should be adequately analyzing and considering other forms of fertility control.

The narrowed purpose and need statement also conveniently restricted the BLM to providing analysis on only past study of ovariectomy via colpotomy. In the interest of transparency, and to

show the public that all available options were being considered by the agency, the BLM should have included discussion of its study in conjunction with the University of Kentucky that experimented with tubo-ovarian ligation via colpotomy as a method for sterilization in mares. (Attachment 26). This project began in 2015 and ended early in 2018 due to severe complications as a result of the procedure. The Groups recognize that this procedure is different from ovariectomy via colpotomy, however it did utilize the colpotomy technique. Therefore, including the study and explaining to the public how it differed and how the BLM believes that the results are not expected to be the same in the proposed study is an important part of the NEPA process that is lacking from the EA.

2. BLM must consider at least the forms of sterilization that it previously proposed to study along with ovariectomy via colpotomy.

In 2016, the BLM proposed to study three sterilization experiments on the wild mares at the same facility in Hines, Oregon. The three experiments were to be conducted with the aid of staff from Oregon State University, on 255 wild mares, and would have focused on three techniques: (1) ovariectomy via colpotomy, (2) tubal ligation, and (3) hysteroscopically guided laser ablation of the oviduct papilla. The current EA now arbitrarily dismisses these options because they do not meet the second purpose of the BLM's action, to study ovariectomy via colpotomy. EA at 46. The BLM also simply says that these options are not ready for study. However, this makes no sense—and is certainly not adequately explained by the agency—since this was equally true of these methods when the agency proposed to study them in 2016.

The BLM must analyze alternative methods for sterilizing wild horses including more modern ovariectomy via laparotomy as well as less invasive procedures including oviductal ligation and laser ablation of the UTJ (papilla). The latter two methods – which the 2015 NAS review panel said "would be safer – with less risk of hemorrhage and evisceration – and probably less painful" – have the added advantage of not causing the behavioral changes that will have a profound effect on wild herd integrity. The American College of Veterinary Surgeons describes laparoscopic surgery as the best method for ovariectomy and that notes "with the advent of laparoscopic (keyhole) surgery, all other techniques have become relatively dated" because laparoscopic surgery provides far greater "visualization and access" and is "minimally invasive," especially in comparison to ovariectomy, which involves removing the ovaries "with a crushing-type instrument." As such, these are clearly more humane options that the BLM should consider and analyze for implementation and study in order to meet its first primary purpose as stated in the EA.

Further, it should be noted that by the BLM's own admission the mares that will be involved in the proposed study are "open" or not pregnant. Therefore, the BLM can no longer rely on the justification that it needs a procedure to do on pregnant mares because none of the available mares currently held at the Hines Corral will be pregnant come August. As such, the BLM cannot discount any methods such as Medical Cyanoacrylate Glue to Block Oviduct because it can only be applied in open (non-pregnant) mares "[b]ecause a majority of mares gathered by BLM are pregnant, there would be limited applicability for wild horse mares." EA at 47. By this reasoning, the results of the proposed study of ovariectomy via colpotomy will also have limited applicability for wild horse mares coming off the range, who are pregnant because the results

will only be applicable to open mares, who have been in holding for a year, and who will receive the procedure at a holding facility (instead of a mobile, on-range set up). While the Groups in no way endorse the performance of ovariectomy via colpotomy on open or pregnant mares, the Groups emphasize that it is clear that the data gained by this study will be of little to no use to the agency since it is not being performed on pregnant mares. The BLM did note in the EA that this decision document only spoke for this study and that a new NEPA process would be required if it was used elsewhere or again in the future, however that hypothetical new NEPA analysis would start flawed because it would propose to implement a procedure on pregnant mares that the agency had only tested on open mares. Since the new proposal's design frustrates the BLM's ability to use the data in the future, the Groups ask the BLM to abandon its plans to conduct these now arbitrary procedures and spare the mares unnecessary pain.

Likewise, BLM may not rely on the experiment from the Sheldon National Wildlife Refuge as an ostensible reason for excluding other alternative forms of sterilization from consideration. As the agency is aware, when BLM originally proposed to study ovariectomy via colpotomy along with two other, more humane procedures in 2016, the study at the Sheldon NWR was already underway. Accordingly, because BLM previously decided to study these more humane procedures at a time when it already knew about the Sheldon NWR study, the agency has already concluded that these procedures are ripe for study—and its refusal to consider them now is another indication that BLM has unreasonably narrowed its purpose and need in a manner that is arbitrary and capricious and is an unexplained deviation from the agency's prior position.

3. BLM should instead try to implement a PZP program within the HMA.

The BLM must consider management of the wild horse population at least at the levels expressed in the last DNA, and now Alternative A, while utilizing Catch Treat and Release ("CTR") methods for the vaccination of all mares over 1 year of age, and implementation of the PZP–22 or native PZP fertility control vaccine. The use of PZP fertility control is scientifically established, cost–effective and widely accepted in the mainstream wild horse advocacy and scientific communities. (Attachment 14, p. 99-112).

The BLM must both analyze and incorporate in this analysis research which indicates that a two-shot protocol (PZP-22 followed by a native PZP booster) conveys three years or more of infertility in mares. (Attachment 14, p. 102). In fact, Dr. John Turner of the University of Toledo Medical College stated in recent correspondence with the Groups that PZP-22 is now dartable and ready for mass production. PZP-22 is a very promising contraceptive with longer-term effects on wild mares. According to Dr. Turner, PZP-22 has a 40 percent rate of effectiveness after the first application. After the second application, there is a demonstrated more than 90 percent rate of efficacy for at least five years. The advantage of this humane, reversible fertility control is that it protects the genetic viability and variability of our "healthy, self-sustaining herds" as mandated in the WHA, if treated mares are rotated. This kind of research should have been the BLM's focus, rather than the invasive experimental sterilization of wild mares that has been proven to needlessly inflict pain and result in life-threatening complications.

Humane fertility control is largely misrepresented in this EA. PZP-22 *is* cost-effective, perhaps even more so than surgical sterilization. The financial advantage of this contraceptive is that the cost of a dose (both the primer and booster) are subject to economies of scale. According to Dr. Turner, if PZP-22 was ordered by the thousands of doses, each dose (both primer and booster) would cost only $117 per dose. For example, an economic model published in a peer reviewed article predicted that BLM could attain its population goals and save $8 million in one HMA by using PZP fertility control and reducing and eventually eliminating removals. (Attachment 27). Even the NAS warned that the BLM's continuing practice of roundup and removals is "expensive and unproductive for the BLM and the public it serves." (Attachment 14). The cost savings of comprehensive PZP use is substantial.

By contrast, the costs of the ovariectomy procedure remain the same (no discount based on number of surgeries performed) and could rise exponentially as more mares are treated (cost of caring for recovering mares, injuries, "human euthanasia", medications, etc.) Surgical sterilization also presents the logistical problem of being unable to rise to scale. On an HMA with hundreds of mares, performing hundreds of ovariectomies is completely unfeasible without a fleet of veterinarians and techs to provide aftercare and observation, assuming that there are enough veterinarians trained in such an obscure surgical procedure who would be willing to perform it. This should demonstrate to any logical mind that, along with its ethical and biological problems, ovariectomy is not cost-effective and a negligent expenditure of tax-dollars.

Of the recommended fertility control alternatives, the NAS in 2013 concluded that the only method available for use now, without further research, is the PZP birth control vaccine. (Attachment 14, pgs. 81 and 6). Therefore, humane and cost-effective strategies for managing wild horse populations on the range through reversible, non-hormonal fertility control must be used more vigorously and without implementing removals. The Chair of the Committee overseeing the 2015 NAS research review panel, Guy Palmer, reiterated for the Groups in a recent conversation that,

> A primary conclusion from the committee in the NAS Report was that PZP has been shown to be effective within isolated populations (e.g. island populations) and has potential to address the high level of fecundity in the intermountain west while maintaining desirable behavioral traits of horse bands.
>
> Application on moderate scale (approximately 100 mares) has been shown to be effective in reducing fecundity within treated mares. However, the effectiveness at the population scale relevant to the intermountain west has not, to my knowledge, been tested.

As such, the use of PZP, as it was discussed in the DNA, to manage this herd is clearly a viable alternative.

The EA must also incorporate data showing that the PZP fertility control vaccination has been available for decades, has a 30-year proven history of being safe and effective in managing wild horse populations, and is fully supported by the public and animal welfare organizations. (Attachment 14). In the EA, the BLM must analyze and explain why the

agency has failed to utilize PZP in a manner and at a level that will make a difference in population rates in the Warm Springs HMA.

Further, the BLM must include and analyze all current peer-reviewed literature on the use of PZP as a management tool, including its effectiveness in reducing and maintaining herd numbers, its effects on herd behaviors, its safety, and the cost of its implementation compared to roundups and removals.

The Groups believe that the BLM must give the originally proposed PZP program a chance to work before pursuing dangerous and inhumane options such as ovariectomy via colpotomy. As such, the Groups prefer Alternative A: while not perfect (as was expressed in the Groups' comments on the DNA submitted during the public comment period) it is a much more humane, economically viable, and socially acceptable alternative to the proposed action.

At bottom, it is clear that BLM simply wants to perform ovariectomy via colpotomy procedures on wild mares, but this flouts the requirement that NEPA cannot be used to justify decisions already made. NEPA requires agencies to consider a range of reasonable alternatives for its proposed action. See 40 C.F.R. § 1502.14. An agency may not artificially constrain its analysis of reasonable alternatives by framing its purpose and need statement for a proposed action in an excessively narrow manner.

D. BLM Must Consider the Social Acceptability of Ovariectomy Via Colpotomy As Well as the Social Acceptability of Other Alternatives.

As described above, Congress created the WHA because the American people love wild horses and burros. Congress declared in the WHA that that "wild horses are living symbols of the historic and pioneer spirit of the West," and "contribute to the diversity of life forms within the Nation and enrich the lives of the American people[.]" 16 U.S.C. § 1331. Congress also required BLM to conduct consultation and "consider the recommendations of qualified scientists in the field of biology and ecology, some of whom shall be independent of both Federal and State agencies." 16 U.S.C. § 1333(a). In the context of wild horse and burro management, this includes experts in wild horse protection to ensure that the BLM would take into consideration information about how the public believes the wild horses should be protected and managed.

In addition, a letter is currently being circulated among members of Congress (Attachment 28). This letter is addressed to Secretary Bernhardt regarding BLM's plan to perform ovariectomy via colpotomy procedures on wild mares in the Warm Springs HMA and urges BLM to drop the proposed study in favor of a comprehensive PZP program. Among other concerns, the letter notes that the proposal is counter to the findings of the NAS, two academic institutions have withdrawn in past iterations of the proposal, and lacks independent, veterinary oversight.

BLM is well aware of the significant public interest in the agency's management of wild horses and burros. As described above, the NAS has twice affirmed that social acceptability is a driving factor in deciding how to manage wild horses and burros. The NAS also specifically

recommended to the BLM to improve the transparency of its management of the Wild Horse and Burro Program. (See Attachment 14). The humane treatment of the horses is paramount.

As described above, the NAS Report also included a chapter on "Social Considerations in Managing Free-Ranging Horses and Burros." In that chapter, the NAS Report reiterated a finding from a previous report by the NAS, noting that "public opinion was the 'major motivation behind the wild horse and burro protection program and a primary criterion of management success,' suggesting that control strategies must be responsive to public attitudes and preferences and could not be based only on biological or cost considerations." This means that any experimental design, like the one now proposed, should include a coherent means of obtaining data relevant to this inquiry—including a robust, scientific measurement of the pain and suffering the animals endure. In choosing how to manage wild horse populations, including which sterilization methods may be appropriate, BLM must consider social acceptability.

Chair of the Committee overseeing the 2015 NAS research review panel, Guy Palmer, reiterated for the Groups in a recent conversation that:

> When BLM first announced its plan to experiment on ovariectomy via colpotomy in 2015, the agency stated that the proposed experiments are part of "[t]he ultimate question in the reasonably foreseeable future of wild horse population management," which is "which [sterilization] methods are safe, effective, and socially acceptable." This analytical approach, considering the **social acceptability of proposed management methods, is consistent with the NAS Report's findings.** Social acceptability of any particular management approach is a **highly relevant issue that the committee encouraged BLM to take into account.** That BLM's experiments on potential management methods would incorporate social acceptability is consistent with this recommendation. (emphasis added)

Likewise, Dr. Bernie Rollin, Professor of philosophy, animal sciences, and biomedical sciences at Colorado State University reviewed the EA and commented on the social acceptability factor in correspondence with the Groups as well, stating:

> The agency seems eager to prevent the public from knowing exactly what would be going on – a move that's especially perplexing and irresponsible since the original research proposal aimed to clarify whether implementing "ovariectomies via colpotomy" was a socially acceptable means of fertility control. I believe that social acceptability is a highly relevant issue that the BLM should take into account when conducting experiments on potential management methods for wild horses.

Consistent with these congressional and scientific findings, BLM's first attempt to experiment on ovariectomy via colpotomy correctly recognized the importance of the social acceptability inquiry. When BLM previously proposed to study ovariectomy via colpotomy, (Attachment 2, 2016 EA), it repeatedly emphasized that a critical aspect of its effort was to evaluate whether this procedure could be "socially acceptable." *See, e.g.*, *id*. at 47 ("BLM has the challenging task of choosing wild horse population control methods that are ecologically viable, financially viable, and socially acceptable"); *id*. at 51 ("Results from the studies under the proposed action would

aid in determining the social acceptability of each procedure"); *id*. at 53 "[t]he ultimate question in the reasonably foreseeable future of wild horse population management"—namely, "which [sterilization] methods are safe, effective, and socially acceptable."); *id*. at 54 ("The results of this study are expected to aid BLM in determining the social acceptability of each procedure."). The BLM's initial acknowledgement of the importance of determining the social acceptability of the procedure was consistent with Congressional intent, and a 1982 Congressionally mandated National Academy of Sciences report, the conclusions of which were reaffirmed by the National Academy of Sciences in 2013.[6]

Suzanne Roy, Executive Director of the American Wild Horse Campaign, echoes how the social acceptability of the procedures is essential to the BLM's management of federally-protected wild horses and burros. (Attachment 8).

> In my years of experience of observing and disseminating eyewitness observations of the BLM's management of wild horses, I have seen a stark difference between public observers' videos and descriptions of BLM's actions on the one hand and the BLM's descriptions of its own activities on the other. Transparency, outside observation, and documentation of the experiments will ensure that members of the public can see for themselves what the wild mares endure and can make their own judgments about whether the experimental procedures are humane or socially acceptable. Only then will the public be informed enough to determine whether the BLM should adopt these procedures on a much larger scale.

As described above, social acceptability is a critically relevant factor that BLM must take into account in this context, and its refusal to do so threatens a violation of the WHA. Congress enacted the WHA precisely because of the cultural value of wild horses. *See* 16 U.S.C. § 1331 ("Congress finds and declares that wild free-roaming horses and burros are living symbols of the historic and pioneer spirit of the West" and "that they contribute to the diversity of life forms within the Nation and enrich the lives of the American people"). Further, in enacting the WHA, Congress mandated that in deciding whether to sterilize wild horses, BLM "shall consult" with the NAS and individuals with expertise in wild horse protection. As described above, the NAS has at least twice reaffirmed the critical importance of considering public input—i.e. considering the social acceptability of its management actions—and has specifically provided methodologies for the agency to do so. Likewise, at every opportunity, the Groups—including Ms. Kathrens, the Humane Advocate on BLM's own Wild Horse Advisory Board—have stressed the critical importance of considering the social acceptability of ovariectomy via colpotomy. Against this

[6] The 1982 NRC Report, "Wild and Free-Roaming Horses and Burros: Final Report," states, *"It continues to be obvious that the major motivation behind the wild horse and burro protection program and a primary criterion of management success is public opinion."* (p. 54). The 2013 NRC Report, "Using Science to Improve the BLM Wild Horse and Burro Program: A Way Forward," states, "*As was pointed out in Chapter 7, the Wild Free-Roaming Horses and Burros Act leaves considerable room for interpretation of its mandates. In 1982, the National Research Council noted that public opinion was the 'major motivation behind the wild horse and burro protection program and a primary criterion of management success,' suggesting that control strategies must be responsive to public attitudes and preferences and could not be based only on biological or cost considerations (NRC, 1982, p. 54)."* (p. 239).

backdrop, it is clear that social acceptability is a relevant factor that the WHA requires the agency to consider in this context—as the agency itself previously recognized by acknowledging that social acceptability is a key part of "the ultimate question" in the reasonably foreseeable future of wild horse population management.

However, in direct contradiction of its previous approach, in conflict with the purposes and consultation provisions of the WHA, and in conflict with the findings of the NAS Report and the comments of individuals and organizations with clear expertise in wild horse protection, including comments from BLM's own Humane Advocate on its own Wild Horse Advisory Board, BLM now states that "[s]ocial acceptability will not be analyzed in detail in this EA." Draft EA at 19. BLM further asserts that its previous recognition of the importance of social acceptability "should not have been" included in its previous attempt to study this experimental procedure. *Id.* BLM now asserts that social acceptability is "not a 'significant' issue requiring analysis." *Id.*

Although BLM asserts that its refusal to consider social acceptability "does not mean . . . that the BLM does not care about the public's views on the proposed action and its potential effects," *id*., it is difficult to understand what other message the public could possibly take from the agency's express refusal to consider whether the public will consider the agency's actions acceptable. Indeed, BLM goes through legal gymnastics to assert that social acceptability does not rise to the threshold of "significance" under NEPA, because it is an "economic or social effect" and thus "social values, on their own, do not rise to the level of significance." *Id.* at 19–20. Because BLM denies that social acceptability is "significant," it is sending a clear message to the public that it does not, in fact, care about what the public thinks—and that it will not even respond to the public's concerns. This is a clear and marked departure from the transparency and responsiveness that the NAS Report—*in response to BLM's own commission*—recommended that the agency adopt in considering how to manage wild horse populations.

Indeed, BLM's current approach is likely only to deepen the issues of trust that the NAS Report stated the agency should consider and ameliorate. *See* Attachment 14 at 253 (recommending that the agency consider any "significant problems of trust among the agency, the scientists, and the interested and affected parties"). The NAS Report recommended a particular methodology for considering public input, i.e. social acceptability, precisely to allow for the growth of trust between the agency and the public: "the committee recommends the analytic-deliberative approach to engaging the public in management decisions and increasing trust through transparency." *Id.* at 269. Here, the agency is sending a clear and stark message that the *even when the public takes the time to inform the agency of the lack of social acceptability of its proposed actions, the agency will not even provide any response*.

BLM's refusal to consider social acceptability is arbitrary and capricious. First, BLM acknowledges that it would need to address social acceptability if it prepared an EIS. Draft EA at 20 ("If the BLM were preparing an EIS because the proposed action was thought to have significant effects on the natural and physical environment, and those effects were intertwined with social values, then the social values would be discussed and addressed by that analysis."). In doing so, BLM clearly acknowledges that social acceptability is a relevant factor that

requires consideration. However, BLM insists that because it is preparing an EA, "the issue of social acceptability does not meet the BLM's interpretation of a 'significant' issue requiring detailed analysis." *Id.* This reasoning lacks merit, because as described above, BLM is violating NEPA by refusing to prepare an EIS here. Accordingly, because BLM is obligated to prepare an EIS, by its own reasoning, it must consider social acceptability as well.

Second, social acceptability is an issue that must be considered even if BLM only prepares an EA. As described above, social acceptability is a relevant factor that the agency must consider in light of the WHA's purposes, its mandate that BLM consult with the NAS and experts in wild horse protection, and the input that BLM has received from the NAS and such experts—as BLM itself previously recognized in acknowledging that social acceptability is a key part of "the ultimate question" in the reasonably foreseeable future of wild horse population management. Regardless of whether the agency prepares an EIS or an EA, the NEPA process remains the only arena in which the agency announces the reasons for its action to the public and accepts and responds to public input. Accordingly, because social acceptability is a relevant factor, BLM must consider it here.

Finally, BLM has failed to provide any reasoned explanation that substantively expands on the ostensible reasoning that Court already found inadequate to justify eliminating consideration of social acceptability. At the PI hearing, BLM argued that the fact that "social acceptability" was not part of the project's "purpose and need" was a sufficient justification for the agency's failure to consider this issue. The Court was not convinced. *See* Attachment 9 at 26 (responding to the government's "purpose and need" argument by saying "That's not an explanation. That's just a statement that you're not doing it."); *id.* at 59 (The agency's explanation is "simply not an explanation" because "[t]heir explanation in 2018 as to why it's not part of the study is that it's not part of the study," and "because it doesn't explain anything, it's by definition arbitrary"). Here, although the agency has added length to its ostensible explanation for its refusal to consider social acceptability, substantively the agency's response is the same: "social acceptability is not a component of the purpose and need for the proposed action." Draft EA at 19. As the Court previously found, "because [this statement] doesn't explain anything, it's by definition arbitrary." Attachment 9 at 59.

At bottom, the litigation history over BLM's experiments on ovariectomy via colpotomy make entirely clear why the agency is now attempting to find an ostensible legal justification for its refusal to consider social acceptability. Because the public has previously shown that social acceptability is a critical factor and has insisted that in light of the public and agency interest in assessing social acceptability, the agency must comply with the First Amendment and allow meaningful and impartial observation of its treatment of statutorily protected wild horses, the agency now views the critically important consideration of social acceptability as a nuisance and is seeking some way of avoiding its consideration altogether. However, the inescapable reality is that Congress, the NAS, independent experts, *and BLM itself*, have all recognized that social acceptability is a critically important factor that the agency needs to consider. Indeed, reaffirming the importance of this factor, the NAS Report even furnished for BLM a specific methodology, backed up by specific scientific literature, for how to consider this type of issue. BLM has, however, dismissed the issue out of hand, and has done so with no effort to even consider the NAS's input. This failure is arbitrary and capricious.

E. The Proposed Action to Surgically Sterilize Wild Horses May Violate the Animal Welfare Act.

In promulgating the Animal Welfare Act ("AWA") in 1966, Congress found that the Act was essential to "insure that animals intended for use in research facilities . . . are provided humane care and treatment . . . ." 7 U.S.C. § 2131(1). To achieve this overriding purpose, the AWA and its associated regulations, *see* 9 C.F.R. § 1 *et seq*., provide minimal standards for the care, handling, transportation, and use of animals for research and exhibition. For animals used in research, the legal requirements extend beyond ensuring the humane care of the animals but also require the establishment of Institutional Animal Care and Use Committees ("IACUC"). IACUCs are provided broad authority to review an institution's program for the humane care and use of animals, to inspect the institution's animal facilities, and to review experimental protocols to ensure that they satisfy criteria intended to avoid the use of animals in unnecessarily duplicative experiments, minimize any discomfort, distress, or pain caused to animals used in experiments, and provide other oversight to ensure the humane treatment of said animals. *See generally* 9 C.F.R. § 2.31.

1. The Proposed Action's Potential AWA Deficiencies

As BLM notes throughout the EA, the proposed actions constitute part of a "research project", "research proposal", and "research study", placing the project under the AWA's provision covering horses used specifically for "research purposes." *See* 7 U.S.C. § 2132(g). As such, BLM is obligated to ensure that the experiment satisfies the requirements contained within the AWA, an obligation that BLM has not met. For example, as noted in our comments on the June 2018 EA and the August 2018 revised EA, the lack of any credible post-operative care plan or procedure may violate the AWA. Yet BLM continues to ignore this issue in the May 2019 EA by failing to establish acceptable post-operative care procedures and standards for the treated horses.

AWA standards for pre- and post-operative care are based on established veterinary practices. BLM, however, does not provide sufficient evidence that the experimental ovariectomies satisfy that requirement as it fails to identify established veterinary practices for such procedures, to disclose the specifics of such practices, or to discuss how the protocol for this experiment will satisfy such standards. Serious risks to the welfare and even the survival of treated horses exist given the proposed controversial method of "blunt dissection" to puncture the peritoneum, which would be enlarged specifically for the purpose of facilitating entry by hand. *See* May 2019 EA at 30.

Attached to our comments on the June 2018 EA and the August 2018 revised EA were several declarations that identified significant concerns with BLM's proposed action. Dr. Robin Kelly, an equine veterinarian with 35 years of experience, stated: "the post-operative care/management proposed for these mares is minimal compared to the significant post-operative recommendations for domesticated mares. These recommendations include keeping mares tied in a tie stall/tie line to prevent them from laying down/rolling to reduce risk of post-operative hemorrhage or herniation of bowel thru the vaginal incisions that must be left open for second

intention healing." (*See* Decl. of Dr. Robin Kelly, Attachment 16 at 3). In addition to inadequate post-operative monitoring, other serious concerns include using sedatives and opioids. "Wild horses do NOT sedate well . . . due to their intense 'fight or flight' response to confinement . . . wild horses will explode as their consciousness responds to drug levels waning." (Decl. of Dr. Robin Kelly, Attachment 29 at 2).

Elective procedures such as ovariectomies that should be performed under general anesthesia do not rise to the level of an emergency surgery where typical veterinary protocols can be foregone. A number of serious animal welfare concerns stem directly from the failure to abide by the standards set forth by law, most notably that the proposed surgeries would occur in non-sterile conditions, thereby increasing the risk of infections, complications, and death. AWA regulations state that "major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions." 9 C.F.R. § 2.31(d)(ix). BLM admits this standard cannot be met, observing that "the surgical field may not be entirely sterile," but stating the agency will take steps to sanitize the mares and the instruments used in the surgery. *See* May 2019 EA at 30. Yet the proposal does not meaningfully discuss how the operating area of the facility itself would be maintained under aseptic conditions. Under the current proposal, and given the reality of the conditions of the facility, BLM would not be able to maintain an adequately aseptic space, which violates AWA requirements.

2. *BLM Cannot Continue To Rely On CSU's IACUC Approval*

Related to the failure to comply with the AWA, is BLM's continued reliance on CSU's IACUC approval in order to move forward with these experiments, despite CSU removing itself entirely from the research project. *See* May 2019 EA at 21 ("The veterinarians contracted by BLM would follow the same surgical protocol originally approved by the CSU Institutional Animal Care and Use Committee[.]"). The fact that CSU will no longer be involved in any capacity makes BLM's decision to proceed with ovariectomizing mares, as well as the agency's insistence on using CSU's IACUC, inappropriate. Furthermore, CSU's departure fundamentally alters the proposed action, including the proposed experiment to assess ovariectomy via colpotomy as a management option.

BLM should reevaluate the adequacy of CSU's proposed experimental protocol, as well as the assumption that CSU's IACUC approval can be relied on given the changed circumstances. CSU's decision not to participate in the experiment dramatically altered the scope and nature of the study in terms of animal welfare observations being omitted and qualified personnel no longer being involved. The issue of the proper care and use of animals in experiments is an area of intense public interest and scrutiny. Since such use is dependent on IACUC approval of the experimental protocol, BLM cannot simply ignore CSU's decision to abandon the ovariectomy study and its partnership with the BLM for this particular project, or the fact that the IACUC approval was premised on CSU's participation and ability to provide oversight, which CSU's withdrawal automatically nullifies. For these reasons, it is clear that BLM should not proceed with these experiments.

3. *BLM's Arguments on Applicability of AWA are Unavailing*

The AWA applies to the wild horses BLM intends to use in its research experiments, despite BLM's arguments to the contrary. In its Record of Decision ("ROD") dated September 12, 2018, BLM stated that "[n]o applicable law requires BLM to obtain IACUC approval for these procedures" because "BLM has determined the horses and research protocols used in this project are considered farm animals exempt from regulation by the AWA, and therefore requires no IACUC oversight." ROD at 20-21. Although this ROD has been vacated, and therefore no longer constitutes BLM's official decision in this matter, we nonetheless wish to address these arguments in order to inform future decision-making.

The AWA's protections are extended to "animals" as that term is defined in the Act. The AWA defines "animal" as follows:

> The term "animal" means any live or dead dog, cat, monkey (nonhuman primate mammal), guinea pig, hamster, rabbit, or such other warm-blooded animal, as the Secretary may determine is being used, or is intended for use, for research, testing, experimentation, or exhibition purposes, or as a pet; but such term excludes (1) birds, rats of the genus Rattus, and mice of the genus Mus, bred for use in research, (2) horses not used for research purposes, and (3) other farm animals, such as, but not limited to livestock or poultry, used or intended for use as food or fiber, or livestock or poultry used or intended for use for improving animal nutrition, breeding, management, or production efficiency, or for improving the quality of food or fiber.

7 U.S.C. § 2132(g).

Under this definition, wild horses are "animals" pursuant to the Act because the second exemption does not apply. BLM clearly intends to use the wild horses at issue for research purposes. As stated above, the EA repeatedly refers to the proposed actions as constituting part of a "research project", "research proposal", and "research study." The EA sets forth clear research objectives and describes the research methodology. May 2019 EA at 27-32. BLM does not argue otherwise.

BLM argues instead that the third exemption applies, such that wild horses may be categorized as farm animals and therefore not subject to regulation. The AWA defines "farm animal" as follows:

> Farm animal means any domestic species of cattle, sheep, swine, goats, llamas, or horses, which are normally and have historically, been kept and raised on farms in the United States, and used or intended for use as food or fiber, or for improving animal nutrition, breeding, management, or production efficiency, or for improving the quality of food or fiber. This term also includes animals such as rabbits, mink, and chinchilla, when they are used solely for purposes of meat or fur, and animals such as horses and llamas when used solely as work and pack animals.

9 C.F.R. § 1.1.

Wild horses clearly do not constitute "farm animals" under this definition. First, farm animal means "any domestic species . . . of horses." Wild horses are, by very definition, not domestic species.[7] Second, wild horses have not "normally and . . . historically, been kept and raised on farms in the United States." Third, wild horses are plainly not intended for use as "food or fiber or for improving animal nutrition, breeding, management, or production efficiency, or for improving the quality of food or fiber." BLM's argument to the contrary strains credulity.

Additionally, in support of its argument that wild horses are exempt from the AWA, BLM points to a 1990 notice published by the Animal and Plant Health Inspection Service ("APHIS") that articulated the agency's intent "to include horses used for biomedical or other nonagricultural research . . . as regulated animals under the Act." 55 Fed. Reg. 12,630 (Apr. 5, 1990). APHIS determined this action was necessary "to promote the humane care of these animals." *Id*. The ROD stated: "[s]ince this project includes research that is neither biomedical nor nonagricultural, the horses used in the project are exempt from regulation of AWA.[8] ROD at 21. BLM provided no analysis for this conclusory assertion.

BLM's proposed research experiment qualifies as biomedical research. The term "biomedical" is not defined in the 1990 notice, the AWA itself, or its implementing regulations. However, the term "biomedical" is commonly understood to mean "of or relating to biomedicine"[9] with "biomedicine" being defined as "medicine based on the application of the principles of the natural sciences and especially biology and biochemistry."[10] "Medicine" is defined as "the science and art dealing with the maintenance of health and the prevention, alleviation, or cure of disease,"[11] and "biology" is defined as "a branch of knowledge that deals with living organisms and vital processes."[12] BLM's experiments are designed to evaluate, in part, the efficacy of a surgical technique that will affect reproduction, a vital process, and whether that technique negatively impacts the maintenance of the mares' health. *See, e.g.*, May 2019 EA at 27 ("Objectives . . . (2) Evaluate the immediate and short-term effects of the surgical procedure, in terms of morbidity and mortality, on free-roaming wild mares."). Therefore, this research

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[7] "Wild" is defined as: "living in a state of nature and not ordinarily tame or domesticated; growing or produced without human aid or care; related to or resembling a corresponding cultivated or domesticated organism." Merriam-Webster Dictionary (online ed.). Available at: https://www.merriam-webster.com/dictionary/wild.

[8] The ROD also noted that "USDA's 'Licensing and Regulation Under the Animal Welfare Act' (APHIS Program Aid No. 1117) states that 'agencies of the Federal Government that do research are not required to register with USDA' and 'agricultural research that uses horses and domestic farm animals are exempt by regulation and do not have to be registered.'" ROD at 21.

[9] Merriam-Webster Dictionary (online ed.). Available at: https://www.merriam-webster.com/dictionary/biomedical.

[10] Merriam-Webster Dictionary (online ed.). Available at: https://www.merriam-webster.com/dictionary/biomedicine.

[11] Merriam-Webster Dictionary (online ed.). Available at: https://www.merriam-webster.com/dictionary/medicine.

[12] Merriam-Webster Dictionary (online ed.). Available at: https://www.merriam-webster.com/dictionary/biology.

constitutes biomedical research that is subject to the AWA.

BLM's proposed research experiment also qualifies as nonagricultural research. The term "nonagricultural" is not defined in the 1990 notice, the AWA itself, or its implementing regulations. "Agricultural" means "of, relating to, used in, or concerned with agriculture."[13] "Agriculture" is defined as "the science, art, or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products."[14] Livestock is defined as "animals kept or raised for use or pleasure."[15] Wild horses are not livestock because they are not kept or raised for use or pleasure, in contrast to domesticated horses. Rather, as stated in the Wild Horse Act ("WHA"), "wild horses are living symbols of the historic and pioneer spirit of the West," that "contribute to the diversity of life forms within the Nation[.]" 16 U.S.C. § 1331. Furthermore, wild horses are not "raised" and they are not "products" that are "prepared and marketed." Therefore, BLM's proposed research experiment is not agricultural in nature because it does not involve the preparation and marketing of livestock. Rather, the proposed research experiment constitutes nonagricultural research, and is subject to the requirements of the AWA.

The AWA applies to BLM's proposed research experiment, and therefore BLM is obligated to comply with all provisions of and protections provided by the Act, including an IACUC surgical procedure.

IV. CONCLUSION

For the reasons explained above, the Groups assert that the EA is woefully inadequate in that it failed to provide the "hard look" at the full suite of direct, indirect, and cumulative environmental impacts of the proposed action and alternatives on the human environment. It may also violate other federal laws including the AWA.

Specifically, the EA failed to properly analyze the environmental impacts of the ovariectomy by colpotomy procedure on horses from the Warm Spring HMA. Furthermore, the BLM clearly violated NEPA by failing to thoroughly consider a reasonable range of alternatives and for not subjecting this proposal to evaluation in an EIS. NEPA requires Federal agencies to consider environmental effects that include, among others, impacts on social, cultural, and economic resources, as well as natural resources. The EA failed to provide a legally sufficient analysis of these issues as has been thoroughly documented in this letter.

These issues, the deficiencies in the EA as articulated in this letter, as well as the other information required by NEPA to permit the public to fully understand the environmental impacts of the proposed action and to provide substantive and informed comments in response

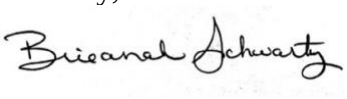
[13] Merriam-Webster Dictionary (online ed.). Available at: https://www.merriam-webster.com/dictionary/agricultural.
[14] Merriam-Webster Dictionary (online ed.). Available at: https://www.merriam-webster.com/dictionary/agriculture.
[15] Merriam-Webster Dictionary (online ed.). Available at: https://www.merriam-webster.com/dictionary/livestock.

must be included in an EIS. In this case, the BLM should use the current EA to determine that an EIS is required to fully evaluate the environmental impacts of this action including those associated with the proposed ovariectomy study in Oregon.

Should the BLM ignore the compelling evidence included in this comment letter and elect to proceed with the proposed action, the Groups will evaluate all options, including litigation, to prevent this project from proceeding.

Thank you for your consideration of this information.

Sincerely,



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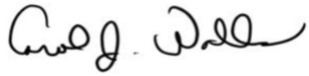

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Attachments

Attachment 1: AWHC's 2016 Comments; AWHC and AWI's 2018 Comments; AWHC, TCF, and AWI's 2018 Comments on the BLM Oregon Spay Experiments; and AWHC, TCF, and AWI's 2019 Warm Springs DNA Comments

Attachment 2: BLM's 2015 Mare Sterilization Research EA (DOI-BLM-OR-B000-2015-0055-EA) and BLM's two 2018 (June and September) EA's (DOI-BLM-ORWA-B050-2018-0016-EA)

Attachment 3: AWHC, TCF, and Ms. Kathrens' 2016 Request Letter; BLM's Letter Rejecting AWHC, TCF, and Ms. Kathrens' Request; AWHC, TCF, and Ms. Kathrens' Response to Rejection Letter; and BLM's Second Letter Rejecting AWHC, TCF, and Ms. Kathrens' Request

Attachment 4: Plaintiff's Motion for Preliminary Injunction (Filed 08/15/2016)

Attachment 5: Plaintiff's Motion for Preliminary Injunction (Filed 09/28/2018)

Attachment 6: Order Granting Plaintiff's Motion for Preliminary Injunction (Filed 11/13/2018)

Attachment 7: IBLA Decision (11/26/18)

Attachment 8: 2018 Ms. Roy and Ms. Kathrens Declarations

Attachment 9: Transcript of Oral Argument on Plaintiff's Motion for Preliminary Injunction (Filed 11/08/18)

Attachment 10: Plaintiff's Exhibit List from Motion for Preliminary Injunction to halt the BLM's Oregon Spay Experiments (Filed 08/15/2016)

Attachment 11: "Discussion of Colpotomy – Leon Pielstick" (originally part of the Plaintiff's Exhibit E from Attachment 10)

Attachment 12: Photos from 2019 EA marked by the Groups to demonstrate where cameras should be mounted

Attachment 13: 2015 National Resource Council Report

Attachment 14: "Using Science to Improve the BLM Wild Horse and Burro Program: A Way Forward," National Academy of Sciences, June 2013.

Attachment 15: Statement by Dr. Michael Ball

Attachment 16: Statement by Dr. Robin Kelly (as included with the Groups' First 2018 Comments)

Attachment 17: Statement by Dr. Allen Rutberg (as included with the Groups' First 2018 Comments)

Attachment 18: Statement by Dr. Pamela Corey (as included with the Groups' First 2018 Comments)

Attachment 19: Detailed Summary of University-led Research Projects for Improved Fertility Control Tools for Wild Horses

Attachment 20: *Is it safe to spay a mare?*, Dr. Peter Knox, DVM, PracticalHorsemanmag.com.

Attachment 21: Public Policy Polling 2017

Attachment 22: "Ovariectomy," University of Florida Large Animal Hospital, College of Veterinary Medicine

Attachment 23: *Can ovariectomy be justified on grounds of behavior?*, J.R. Crabtree, Equine Vet. Educ. (2016).

Attachment 24: *Reproductive Behavior of the Stallion*, Sue McDonnell, Ph.D.

Attachment 25: *AWHPC v. Jewell*, No. 1:16-cv-00001-EJL (D. Ida.).

Attachment 26: *Tubo-ovarian ligation via colpotomy as a method for sterilization in mares*, University of Kentucky

Attachment 27: *An Economic Model Demonstrating the Long-Term Cost Benefits of Incorporating Fertility Control into Wild Horse (Equus Caballus) Management Programs on Public Lands in the United States*, Charles W. de Seve, Ph.D., and Stephanie L. Boyles Griffin, M.S., Journal of Zoo and Wildlife Medicine, 2013.

Attachment 28: Congressional Dear Colleague Letter

Attachment 29: Statement by Dr. Robin Kelly (as included with the Groups' Second 2018 Comments)